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FETAL MEDICATION.

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That the normal status of the foetus in utero and its continued viability to the date of its birth depends largely on the normal condition of the mother's life fluid—the blood—needs no argument at my hands. It is a well known fact. Not only do we know any dyscrasia affecting either parent may, and often does, leave its ugly impress on the foetus, but also that it may even destroy its life. We know that infants have been brought forth with the variolous pustule already well advanced in development. The fearful loss of foetal life because of maternal contamination with syphilis while pregnant is not less an established fact. It is not less well known that some forms of acute infectious and inflammatory diseases cause the death of the foetus in utero, and lead to abortion or miscarriage. Notably, variola and pneumonia produce this result in the pregnant woman, especially so if well advanced in her term. All these and other well recognized clinical observations in this connection need only to be mentioned—they are long well recognized facts.

Not less is it well known that the foetus is sustained in its viability, is nourished and acquires its material for growth, up to the time for the commencement of independent existence, from the blood of the mother. Not that there is a direct vascular connection with the arteries and veins of the mother. But

the osmotic principle gives a connection sufficiently close to admit of free passage of the circulating medium from the mother to the foetus and return. That this occurs rapidly will be demonstrated further on, and has been many times proven by experimentation. Have we taken sufficient note of this fact from a practical point of view? Have we considered that we may medicate the foetus at will through the medium of the mother's blood? It is true that medical men have, and do now, make some use of this knowledge; but may we not widen the field, and by doing so add much to the comfort of the mother in some instances, and much to the chances of the continued viability of the foetus as well as to its future health prospects.

If a pregnant female comes to us with the statement that she has had several abortions or miscarriages, and is now anxious to bring forth a living child, we deem it to be our duty to carefully treat the case. We inquire into her history and also that of her husband. We may not always find some marked dyscrasia present in either of them, but generally we shall find evidences of syphilitic contamination or of a morbid condition that prevents continued foetal viability to the end of the term of pregnancy. If the blighting cause is a specific poison, then anti-specific remedies are demanded. There is no need for me to refer to the many cases already given in medical literature, to show that a pregnant syphilitic woman may be so treated as to bring forth a seemingly healthy child, though many failures may have fallen to her lot before specific treatment was instituted in favor of foetal viability. True, it is easy to ask, "May

she not, in this instance, have brought forth a seemingly healthy child?" No one can positively say yes or no. But clinical experience has proven that the chances of continued foetal viability under these circumstances are far greater when anti-specific treatment is persistently used than when it is not.

Other causes than syphilis may produce the death of the ovum, as insufficient placental respiration, anæmia, etc. These can be met as the special cases may require.

Some years ago I treated a young man for primary, indurated chancre. After the ulcer was healed, but before secondary lesions were manifested, he married a fine, healthy girl. He did not ask advice as to whether it was best to unite in wedlock with one who was pure and innocent. In less than a year his wife came to me with a well marked syphilitic eruption, and gave a clear history of vulval sores. She had inguinal and post-cervical adenitis, sore throat, etc. She was placed on anti-syphilitic remedies. In three months more she came, with evidences of conception, and a few marks of constitutional syphilis still visible. The condition of the husband was that of a marked syphilitic. He had been all too indifferent to his situation and advice concerning his case. By persistent efforts I kept the mother on her anti-syphilitic agents. At term she was delivered of a large, healthy looking boy. No marks of contamination were present then, but within a few months there was undoubted evidences presented by the infant, to show that it had not fully escaped the baneful poison. Under treatment, however, it grew and thrived quite well. How much influence the treatment had in this case I cannot say, but the results were, I think, very good, considering the untoward conditions under which this child was conceived and delivered.

In another similar case that came under my care about the same time, all the clinical circumstances being quite exactly the same, the woman refused regular and persistent treatment. She was treated for about six weeks during the early months of pregnancy. The foetus was thrown off during the eighth month, a mass of decomposition, and the mother was a great sufferer from syphilitic lesions that had remained practically without any treatment for months.

Mrs. V. came to my office in 1870, saying that she had had five successive abortions and was again pregnant. I did not recognize any syphilitic marks in her case at that time, though it was one where such contamination was to be expected. I afterwards learned that her husband had suffered

from syphilis before marriage. The woman was thin, anæmic, feeble, run down. I placed her on the persistent use of tincture ferri chloridi, with hydrarg. bichloridi. As she was anxious to be delivered of a living child at term, she was readily induced to take the remedies. She went to full term, for the first time, and gave birth to a seemingly healthy, male infant. After that she had four or five pregnancies, all successful. She took the same treatment during the second successful pregnancy as the first, but not after that. She was often weak and anæmic during those years, and I often added anti-syphilitic agents to ferruginous tonics prescribed for her. She had several times showed undoubted evidences of constitutional syphilis. Here was a case where success crowned efforts in the interest of foetal viability in a marked degree. True, no one can say that she would not have carried the sixth conception to its full term, but the inference can but be very strong that she would not have done so without proper treatment.

Other and unrecognized causes than those above named are often at work blighting the fruit of the womb. Perhaps every physician of considerable experience has met with instances where both the husband and wife seemed to be entirely healthy. Yet about the close of the fifth to the seventh month, or at most, the eighth, the foetus would die and a still-birth would be the result. No perceptible cause is known. No recognized dyscrasia is present. Under these circumstances I do not believe we need to stand utterly powerless in all cases. If there is not sufficient placental respiration to maintain the viability of the foetus, we should resort to the use of those agents that will aid in giving the needed respiratory power, or so far change the blood of the mother as that foetal life may be sustained to the close of the pregnant term.

Simpson advocated the use of the "alkaline salts for facilitating placental respiration in instances of morbid placenta." Of this plan, Prof. Reamy, of Cincinnati, says he believes it "is of more scientific value than is generally believed by the profession (*Obstet. Gaz. May, 1882, p. 240.*)

Dr. Thrush, of Cincinnati (*loc. cit.*), in discussing this point says, "Two premature births had taken place in two successive pregnancies, the one at five and the other at seven months' gestation, intra-uterine death of the foetus, from fatty degeneration of the placenta, being manifestly the cause of the premature delivery in the second pregnancy. No special constitutional vice was discernible in either husband or wife. This lady,

in her third pregnancy was placed simply upon a systematic course of chlorate of potash, as recommended by the late Prof. Simpson, together with suitable hygienic precautions; the result being that the respective labor occurred at the normal end of utero-gestation, and terminated in the birth of a fully developed, vigorous child."

In cases of this kind, Mr. Grinsdale, of London, claims success with chlorate of potash in a number of cases; not where a constitutional vice is present, but where there is diseased placenta or other reason present why the foetus was rendered non-viable.

If chlorate of potash has such power as to add to respiratory ability of the placenta, or to so far change the maternal blood, and add to its alimental powers for the foetus as to render better the chance of continued foetal viability, may we not have other agents equally good? May not the tinct. ferri chlor., as given in the case of Mrs. V., have had a like effect, as well as that of enriching the blood of the patient. Very able men have advocated this very use of the tincture of iron, and have given as glowing accounts of its utility as have the followers of the plan advocated by the late Prof. Simpson. As the circulation by osmosis, at least, going on between mother and foetus, is sufficiently free, why should not proper remedies properly used have such influences as are here ascribed to them?

Rhigini has noted that iodoform, when administered to the pregnant woman, is soon to be found in the liquor amnii. Dr. Kubasson (*Compend. Medical Science*) has, by using the microphone, observed the effects, on the heart of the foetus, of medicines taken by the mother.

1. Chloroform and chloral hydrate he finds have first a stimulant and then a sedative effect on the foetus, this last effect being evidenced by the dullness and infrequency of the heart's beat, and the greater quietness of the foetus. They act within five or ten minutes, chloral more powerfully than chloroform, and especially so if given per rectum.

2. Opium and its alkaloids cause prolonged irregularity of the heart's beat in the foetus, acting more slowly but for a longer period than chloral or chloroform. Opium acts more powerfully per os than per rectum.

3. Digitalis has also a powerful and prolonged action on the foetus. Dr. Kubasson believes, from chemical examination, that a dose of chloral hydrate taken by the mother is divided, within fifteen minutes, between herself and her foetus, in proportion to their respective weights. The practical conclusion is that a dose of more than

thirty grains of chloral hydrate will be dangerous to the child if given at once, per rectum, or repeated sooner than in half an hour. The same holds good for one and a half grains of opium in tincture repeated sooner than in an hour. (*Medical Press and Circular*.)

If these statements of Simpson, Rhigini, Kubasson and others are true, they can certainly be made of practical utility in many cases in practice, not only to combat the syphilitic dyscrasia, so destructive to foetal life, and not only in cases of any other recognized dyscrasia, or of fatty degeneration of the placenta, but also in many cases where foetal movements, from their violence and long continuance, cause great distress and even the threatening of premature delivery. A little clinical personal experience in this connection may illustrate at least one of the ways in which this knowledge may be used with great advantage and comfort to the patient, and no loss of credit to ourselves. In 1866 my attention was called by a lady in her eighth month of gestation to the very strong movements of the foetus. She said there were times when it was quiet enough for her comfort. But also there were whole nights that she could not sleep or get any rest, on account of its incessant movements, and at times the pain caused by its motions was difficult to endure, on account of their severity. Placing the hand over the abdomen I found its gyrations were to be distinctly felt, and their force and strength were surprising. Being asked to prescribe I was somewhat puzzled. This was a new form of difficulty, undescribed in books or by teachers, as far as I then knew. And my then limited experience in obstetric practice led me to doubt whether I should attempt to do anything. However, as the uterine irritation was quite marked, and the pains were not altogether unlike those leading to miscarriage, I concluded to give her a tolerably full dose of opium. I did not expect to quiet the foetus, but to allay, in some measure, the irritability of the uterus and control the pain, and so render its movements more bearable. In less than an hour the pain had entirely subsided. But it was also noted that the little uterine inhabitant was as quiet as a sleeping baby at midnight. This effect I thought might be simply accidental. The lady, however, was instructed to repeat the dose of opium only when a repetition of forcible movements seemed to bring on distressing pain or to cause threatened miscarriage. On inquiry, a few weeks later, I found that she had several times resorted to the anodyne powders, and they never failed, not only to relieve the pain, but to also

quiet the foetus and check his forcible gyrations. From that date to the present, quite a large number of similar cases have come under my notice, and very many times have I resorted to this practice with quite uniformly good results in giving relief to the pregnant woman. No known or discovered injury has resulted to the foetus from this practice.

Mrs. L. called on me in her eighth month of gestation, third pregnancy. She was having very severe uterine pains, and the character of them might easily have misled one to suppose she was suffering from colic. A close investigation of the cause of the pain led to the discovery that the foetus was in violent agitation, and its incessant motions seemed to cause the pain, and the pain was proportionate to the force of its movements. I gave her a full anodyne. In less than an hour the pain was all gone, and the foetus was also very quiet. She had several repetitions of this experience, but the suffering always ceased when the foetus became quiet, and one full anodyne dose always gave the needed relief.

I will refer to one case more, as a fair type of quite a number with which I have met in obstetric practice.

In June, 1881, I was hastily called to see a young, stout, married lady. She was hale and hearty, a primipara, that had enjoyed the best of health. She stated that she did not think her time was up for a month or more, but might be mistaken. On examination I found the neck of the uterus very little, if in any extent, obliterated, being, as yet, quite its normal length, and no sign whatever of the beginning of real labor. But I further at once noted that the little uterine occupant was kicking around his narrow apartment at a furious rate, and that the pain was proportionate to these foetal gyrations. If the foetus became quiet for a time, there was a complete cessation of uterine pain, and when the little uterine occupant would again commence his furious motions, the pains instantly returned, with proportionate severity. I told the lady that I judged her time for delivery would not be out for perhaps two months, and that the false alarm and pain now endured was induced by the movements of the foetus. I gave her a full anodyne, waited an hour, and all became quiet. The foetus had ceased his summersaults, and no further pain was present to distress the lady or alarm her friends concerning a miscarriage. She was not confined for nine weeks after that date, but had several times to resort to the anodyne for relief from the pain caused by the foetal movements. There was no occasion for the use

of the anodyne, nor any pain present at any time, except that seemingly caused by her very restless uterine occupant.

This is but one of a large number of similar cases coming under my notice, and which I have managed in this way with quite uniform success, as to the relief afforded to the mother and producing quiet of the foetus. I think these instances show clearly that the foetus may be medicated with quite a fair degree of success, and that when its remedial needs are known we may often meet them with a tolerable degree of promptness and certainty. Moreover it has been my experience that most of the so-called "false alarms" of labor, that so annoy and provoke both the pregnant woman and her attendants, are caused by foetal movements, and that the pains cease whenever the little uterine inhabitant is made quiet by any anodyne or hypnotic. I certainly also have attended cases of labor where the uterus was opening its mouth, and all seemed ready for delivery, and yet not a pain would be felt, only as the foetus would move forcibly. It is easy to quiet the foetus, if deemed best, but it may not be always wise to do so in such a case.

No injury has resulted to the foetus from this treatment in my hands, though one can easily see that fatal results might follow too large or frequently repeated doses of any powerful anodyne.

The fear of establishing the opium habit is quite groundless. In no case coming within my experience in this line of practice have I had occasion to give more than six or eight doses of any anodyne, and as this number of doses is stretched over a space of from one to two months, the doses being generally one to two weeks apart, it will at once be seen that any dangers of establishing the opium habit are quite at a minimum.

From what has been stated we think we may conclude—

1st. If we may depend on the results of the experiments of Rhigini and Kubasson, that remedial agents given to the pregnant woman will promptly affect the foetus, and the effects will be proportionate to the dose.

2d. The foetus of a syphilitic mother may have its chances of continued viability greatly increased by proper anti-syphilitic treatment persistently used during pregnancy.

3d. Any recognized dyscrasia of the mother that is likely to destroy the foetus may be often met and foetal viability secured to the end of the term of pregnancy, by administering the remedies to the mother.

4th. In cases of fatty degeneration of the placenta or other placental disease, the continued

viability of the fœtus may be secured by sending to it better blood, *i. e.*, by enriching the mother's blood, or increasing the power of placental respiration, through the use of the alkaline salts, iron, etc.

5th. The movements of the fœtus may be promptly governed by administering anodynes to the mother in fairly full doses.

6th. The internal administration of any powerful therapeutic agent may lead to the death of the fœtus, and hence, to abortion or miscarriage.

IS MEDICINE A SCIENCE?

BY A. H. CARRIGAN, M.D.,
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Read before the Hempstead County (Ark.) Medical Society.

I was stopped on our streets not long ago, by Judge John R. Eakin, of the Supreme Court, and Judge A. B. Williams, of our Circuit Court, and asked the question, "Is medicine a science?"

Judge Eakin had informed me previously that Judge McClure, of Little Rock, had made an address before a literary society of that city, in which he took the position that medicine was an empiricism and not a science. Hence the following remarks:—

The term science is very hard to define. We speak of a scientific work; it may be a mechanical structure, a book, a painting, or any other thing done in accordance with known principles. Science literally means something that is known, or to know; then is medicine something that is known, or is it an empiricism? This is the question we propose to discuss. Empiricism means to pretend to know something that we do not know.

Let us try the rule, and see how it will work. All well informed physicians agree on the knowledge of human anatomy. Name a bone, a muscle, a ligament, a vein, or an artery, and every well informed physician in the world will be able to lay his hand on it. They agree further, *viz.*, as to what are the functions of these organs, tissues and structures, as far as is known. Now, anatomy is one of the branches of medicine and a science; not a completed one, but, perhaps, more nearly completed than any of the branches of medicine.

Physiology is another branch of medicine, which teaches the laws of life, from the simplest cell to man, the highest type of organized being, as manifested in health; and pathology teaches the laws governing the same structures in a diseased state. These laws are known and acknowl-

edged by all well informed physicians of every school. Many of these laws are demonstrable, and the others as much so as the laws of gravitation, which all scientific men acknowledge to be true. No man can demonstrate what life is, yet no sane man would deny that life is. Then we say these laws of life in health and in disease are known and uniform, and that all well informed physicians know and acknowledge them to be so. Is physiology a science or an empiricism?

Materia medica is a branch of medicine, or rather it is a history of the origin, composition and effect of the agents with which physicians combat disease. This embraces a knowledge of botany, chemistry, pharmacy and therapeutics. The first three are exact sciences and capable of demonstration. The last, therapeutics, is where the greatest irrationalism does exist and has existed in all the past. It is in this branch of medicine that quacks and patent medicine venders find the widest field to ply their calling; and it is not to be wondered at that they exert an influence upon the ignorant masses, by placing their almanac medical lore freely in the hands of every man; but from the better informed classes, such as lawyers, ministers, and newspaper editors, we should expect better things. But the compounders of this patent, vicious stuff, that floods our land, and their blatant, brazen agents, that are found in every nook and corner of our country, with brush and paint, publishing their own and their masters' infamy on every pine log, whitewashed wall and fence, these are the miserable ghouls that are robbing the afflicted among the ignorant poor of our land, and giving them worse than nothing in return. And when we ask the powers that be to paralyze their hands, by compelling them to place upon their box or package the name and quantity of each medical agent that enters into these wonderful compounds, we are too often refused, with some unkind remark.

But it is of the better informed classes that we propose to speak more at length. It is by these classes that we are too often sneered at and called empirics, because we fail in one of the branches of our learned profession, forgetting the fact that in the very nature of things, it is impossible to always be exact or even to approximate a demonstration.

Even in this, nearly all well informed physicians agree, as to the use of remedies; and by the practice of vivisection we are enabled to use on the lower animals the great advances made in chemistry and pharmacy, and to perfect our knowledge in regard to the great number of remedies that we already have. And even in this,

those pseudo-philanthropists are doing all they can to prevent us from using the lower animals for the perfection and advancement of our knowledge in this respect.

They say therapeutics is not a science, and when we attempt to make it, as far as possible, a demonstrable science, they throw every obstacle in our way, and then cry out "empiric."

The other branches of medicine, viz., surgery and obstetrics, are now demonstrable, or our knowledge of the principal surgical operations are known as soon as named, by all well informed physicians, which necessarily makes it a science. The same is true in regard to all obstetric procedures.

People that live in glass houses ought not to throw stones. Is law a science? Let us apply the same rule to lawyers that we do to ourselves. Is law a science? One has said that law was the science of the decisions of the judges. The ancient judges are represented as blind, holding the scales equally balanced, which would indicate that they would weigh out equal justice to all parties.

Such might have been the case in primitive times, but such is not the case now. We see our judges in the highest courts of our country often giving a majority and a minority decision on the same subject, the majority ruling. Is the law then a science, or is it an empiricism? Or the law may be well enough, but the judges may be corrupt; which is it? Take the practice of our lawyers in the common courts of our country, and what do we see? One side or the other evidently doing their best to defeat the objects of justice. In this case the law is the science of doing right and the science of doing wrong, the science of virtue and the science of corruption, the science of doing justice to our fellow-men, and the science of defeating the objects of justice, for lawyers have to know how to do all these things, none of which are expected at the hands of an honorable physician.

Is theology a science? We think not, since one sect teach one thing, and another teaches another thing. To say the least, its teachings are not as uniformly held by its teachers as the scientific principles of medicine. Theology, like therapeutics, cannot be demonstrated, but its teachings can be illustrated in the lives of Christian men and women, which class form the highest type of our civilization, yet its teachers can and sometimes do put on the livery of Heaven to serve the devil in, especially when they underwrite for patent medicine humbugs.

The knowledge of theology is not as univers-

ally agreed upon as the knowledge of medicine, by its teachers. Truth is capable of being demonstrated from every standpoint, by all just theories bearing upon it, but many things that we believe and practice, and teach, must, in the nature of things, ever remain only theories, in regard to which, if we can neither believe nor accept them, nor advance a better one on the same subject, self respect would indicate that we had better say nothing.

What shall we say of the editors of our newspapers? We would remark that the press is the power behind the throne, in all civilized lands; it is not the axe or the hammer, the forge or the steam engine, the plow or the hoe, the weapons of warfare or the soldiers that use them; but it is more than all these. It shapes the opinions of the unthinking masses, as well as those that think. It comes to us in our moments of idleness, and we read, it may be but a paragraph; that paragraph may arouse a train of thought that will result in a succession of deeds that may bless or blight the condition of thousands.

Should such a power be used for improper purposes? we think not. But let us see how it is used sometimes. Take up any weekly or daily paper, and you will see some such editorial remark as this: "Black Drop always cures chills." "Everybody uses St. Jacob's Oil." Now all well informed editors know that such statements are not true; and I must say, that a majority of our editors are well informed; yet all will bear witness to the fact, that thousands of such statements can be seen in the newspapers of the day, endorsing and recommending just such patent stuff as we have indicated above. Are the fees these editors get for such statements better than life and health? Surely, they think so, or they would not make them, or they sell false opinions very cheaply, for their opinions, in most instances, sell the stuff to the unthinking masses; and that strangest of cranks in the "human brain, the potency of secrecy," comes to their help with the better informed people, and they are enabled to impose upon them. Thus the editors of our papers inveigle the masses into buying every vicious compound that is thrown upon the market, provided always that the vender has the money to pay for such notoriety and the ingenuity to keep anything out of his stuff that will kill at once.

Then, what sort of a science is editing a newspaper? It is the science of all sorts of power, both good and bad.

Let us notice a few things that modern scientific medicine has done for the race in the last

few years, and let these facts answer the question as to whether medicine is a science or an empiricism. The hypodermic syringe is an invention of scientific medical men, by which, when the stomach cannot retain anything, we can soothe and calm the tortured victims of pain, and reach the brain with proper medicines when all the usual approaches are blocked against us. The aspirator is another instrument by which we can safely penetrate any organ or cavity of the body and take away any septic fluids which, if left alone, would in many instances produce death; and Esmarch's bandage, by which we now, in many instances, have a bloodless as well as a painless surgery. Those of us who have racked our brains over the uncertainty of the pulse, know what a blessing the discovery and application of the fever thermometer is, not only to the physician, but to his patients also; and the microscope, by which the educated physician is enabled to understand the nature and cause of many diseases that were formerly as sealed books; also many crimes are brought to light, which without it would never be known. These are a few of the many instruments that modern scientific medicine has brought into requisition to clear up the misty uncertainty of the past, and I would ask any candid, capable observer, have they done it? During the past winter, when smallpox, like a loathsome demon, threatened all parts of our fair land, how many doubted whether vaccination would protect or not? In this field modern chemists have recently cultivated a virus that has been successful in arresting two diseases in the lower animals that always proved fatal to them. These recent discoveries are big with promise to the human race, since by their use we hope and believe, in the near future, to be able to arrest many, if not all, the epidemics that sweep over our land. "Physiological inquiries are pointing out to us the right direction of our therapeutic measures, and lighting up areas to be never successfully illuminated by empiricism." For instance, nitrite of amyl in angina pectoris, hydrate of chloral as a hypnotic, digitalis to furnish compensatory power to a diseased heart, and iodide of potassium to sweep the blood in certain specific diseases; and in jaborandi, or its active principle pilocarpia, with which we can wash the blood of its impurities, even if the patient is unable to swallow; and if some of those flippant, discourteous gentlemen that sometimes practice in our courts would allow us to inject some of this medicine under their skin, we think it would convince them that we understood the science of both making them sweat and spit. But I think I

have said enough to convince the most skeptical that medicine is not only a science, but a living, aggressive science, with greater probabilities of brilliant achievements in the future, than in any other department of human effort. When we look at ourselves and others around us, in our daily routine duties, making no advances in scientific discovery, barely keeping up and using the advances made by others, we often become discouraged; but even this unwelcome picture that some of us have to hold up as our life work, has a silver lining, for we belong to a profession which has done, in this our age, for itself, that which no other learned profession in America has done for itself, viz., compelled the respect, admiration and patronage of Europe.

We hardly know what to say or think of any one who still persists in saying medicine is not a science, with all the achievements of the third quarter of the nineteenth century beaming upon them with more than electric brightness, unless they belong to that class described by the poet, when he says—

"When in sickness, if not before,
God and the doctor we adore;
But in health both are alike required;
God is forgotten and the doctor slighted."

SCHOOL HYGIENE.

BY T. J. HOPPEL, M.D.

An abstract of an address read before the West Tennessee Normal Institute.

The teacher should study the manner in which his room is lighted. The want of a proper amount of light, and the faulty direction from which the light is admitted, is a frequent cause of myopia, or, discarding technicalities, of short-sightedness. An examination of the eyes of school children and college students, made by Dr. Priestly Smith, showed "five per cent. of school children under thirteen years of age, and twenty per cent. of college students, affected by short-sightedness." Dr. Ware, of England, in a paper read half a century ago, before the Royal Society of London, established the fact that "short-sightedness was much more prevalent among the educated than the illiterate. Cohn, of Breslau, has made more extended research into the matter than any one else, and from his report we find, "in the elementary school 6.7 per cent., in the intermediate school 10.3 per cent., in the high school 19.7 per cent., and in colleges 26.2 per cent. of the pupils affected with the disease in a greater or less degree." "After a full course in the high school, 50 per cent. of the first class, and

in colleges 55 per cent. of those finishing their education, were short-sighted."

Dr Loring, of New York, seriously discusses the question as to whether the human eye, under modern education, is changing from its normal state and becoming myopic.

The Ophthalmological Section of the International Medical Congress, held in Geneva, in 1877, voted its belief in the two following propositions, among others:—

"1st. The ordinary causes of myopia (near-sightedness), are heredity and eye work, the influences of which may be separate or combined."

"2d. The progress of civilization, and particularly of school education, tends to increase the extension of myopia."

The labors of all the different writers upon the subject have conclusively shown a direct connection between the disease and improper or excessive study under imperfect illumination. Teachers, directors, and parents have an interest in school hygiene pertaining to this important question. You see many of the present generation early in life wearing glasses. Not all of these are near-sighted. Some wear glasses because they need them, some because it is fashionable. If you can, in your school room, so manage as to lessen the number of those who are compelled to wear glasses, you decrease the list of those who wear them for other causes. How can you, as teachers, parents, or friends, remedy this evil? Much depends upon the faulty way in which the school rooms are lighted; and, of course, then, much can be done, by way of relief, by knowing the evil and as far as in your power removing it. An insufficient light is a great evil, but an improper light may prove a worse one. A careful study of the subject has shown that school rooms should be lighted from the pupils' side, preferably the left, if possible, and that the windows should occupy an area in the wall equal to at least one fifth of the floor space. If not enough light can be gotten from the left of the room, then admit it, if possible, from the right side; but by no means from the front, or, unless compelled to do so, from the rear. If from the front, the glare of the light is so great as to damage the eye; if from behind, many of the rays are cut off by the child's head; if from the right side, a few of the rays are lost, in right-handed children, by the way in which they ordinarily hold their books; or to express the idea a little differently, the eye should always receive the reflected rays, not the direct ones. To favor the eye still further, windows should be curtained,

and those school books should be selected in which the paper is smooth, white, and the type large and distinct. The study of the pupil should be carried on, as much as possible, by daylight; the use of artificial light should be avoided.

Further, if, when you take charge of a new school, you find the light admitted into the school room at a disadvantage, not in accord with scientific investigation, you can so arrange the desks and seats in the room as to remedy the evil to a great extent. Again, the proper slope of the lid of the desk materially aids vision. A book or slate on a level surface cannot be used by a pupil without his or her leaning forward in a constrained position, deleterious both to vision and the respiratory organs. The leaning forward produces a congestion of the whole visual apparatus, resulting in short-sightedness.

The proper inclination of the desk lid for reading or any kind of study is an angle of about 40° or 45°; for writing, not more than 20°. You can demonstrate this fact by having a child with a normal eye read from a book held to suit the eye, and you will find the angle formed by the book so held with a horizontal line, to be about 40° or 45°. Follow nature in these matters. She is generally correct. A movable desk lid, to fix at 20° for writing and 45° for other purposes, would be a desideratum in our school rooms.

A proper relationship between the seats and desks should also exist. The old straight-back bench belongs to the age of the Inquisition, and has long been discarded; but the opposite extreme must be guarded against. From careful research and examination, it has been demonstrated that the front edge of the seat should be in a perpendicular line with the posterior edge of the desk, and should be a little higher in front than behind! while the back, after inclining slightly forward in the lower sixth, should then bend back only a few degrees from the perpendicular. Desks and seats should be adapted to the age and stature of the children in the school room.

The bones of children differ materially, in their component parts from those of adults. There is an excess of animal matter in the bones of children, making them softer and more flexible than those of adults; hence the necessity, in addition to the demands of vision, for a perfectly adapted seat. You, then, are to see that your school is so seated as to best conform to the facts demonstrated, as stated above, in reference to the effects of light upon the visual apparatus, and then to see that your pupils avail themselves of light properly

admitted, by retaining proper positions at their desks, correcting at all times any errors that they may fall into, so as to prevent the contraction of bad habits in these matters, which soon become a second nature. Many cases of near-sightedness have been contracted from the vicious habit of holding the book so close to the face as to prevent the teacher from observing any mischief which the pupil may be doing.

HOSPITAL REPORTS.

UNIVERSITY OF THE CITY OF NEW YORK.

CLINIC BY ALFRED C. POST, M.D.,

Professor Emeritus of Clinical Surgery.

Cervical Adenitis.

GENTLEMEN:—This boy, aged nine years, complains of a swollen neck. It is a case of cervical adenitis, an inflammation of the lymphatic glands of the neck, which has gone on to suppuration at this point. I observe, in addition to that, there is a little preternatural fullness in the region of the thyroid body. It is more conspicuous than it usually is, and yet the enlargement is not so great as to be of much importance at the present time, unless it has a tendency to grow. You are aware that the thyroid body is frequently the seat of chronic enlargement or hypertrophy, which is known by the name of bronchocele or goitre, and it presents itself under several different forms, sometimes occurring as a sporadic disease; that is, an individual case occurring here and there, without any special connection with each other; and at other times it appears as an endemic; that is, in certain localities, you find a very considerable portion of the population affected with it. Those localities where bronchocele or goitre occurs in the endemic form are usually deep, shady valleys in mountainous regions, as among the Alps in Switzerland and Savoy, among the hills of Devonshire, etc. This endemic form of the disease, when it occurs in the Valley of Savoy, is frequently associated with a very imperfect cerebral development, and the associated conditions is called cretinism, and the person affected with the disease is called a cretin. In these cases we have an enormous enlargement of the thyroid body, with a very imperfect development of the head. The brain is very small and the stature is dwarf, the ordinary height of a person so affected not exceeding about four feet. In the deepest parts of these valleys a very large proportion of the people are thus affected, the cases differing from the sporadic form, of which the present case seems to be particularly a slight one.

There is a form, however, of bronchocele different from both of those which I have mentioned, and which is known as exophthalmic goitre. In this you have, at the same time with the enlargement of the thyroid body, also a protrusion of the eyeballs, and certain associated nervous symptoms. It is quite a formidable disease. It struck me, on looking at this boy, that his eyes were remarkably full, and it is quite possible that

this may be a case of the incipient stage of exophthalmic goitre. I do not pretend to say that it is so, yet; the symptoms are not sufficiently well marked to make one positive, but there evidently is a slight enlargement of the thyroid body, and his eyes are somewhat preternaturally prominent.

You may remember that, some weeks ago, there was a case here somewhat like this one, so far as the cervical adenitis is concerned, in which there was quite a collection of pus, and in which I made a puncture and evacuated the matter, and injected the sack with a solution of carbolic acid, one to forty. This is known as Collender's treatment, sometimes called collendering the disease—distending the walls of the sack with dilute carbolic acid for the purpose of destroying any germs that might exist there, and favoring the healing of the abscess. It is well known that when, without any antiseptic precautions, an abscess is opened, so that air is admitted into its cavity, a certain amount of decomposition takes place, the discharge becomes more or less offensive to the smell, some symptoms of blood poisoning may manifest themselves, according to the extent of the abscess and the imperfect manner in which the matter is drawn off. These unpleasant consequences are guarded against very much by collendering the abscess; that is, by making an opening of moderate size and distending the abscess with dilute carbolic acid, about one to forty; under varying circumstances it may be from one to twenty, or one to fifty. From one to thirty to one to forty is the strength generally used. When the abscess is a large one, some precaution should be used, so that no considerable quantity of the carbolic acid shall remain behind, to produce toxic effects upon the blood. There are cases on record in which not simply a slight ill effect, but a fatal result occurred from injecting too much carbolic acid into an abscess or other cavity. If a considerable quantity of the acid be absorbed, it produces a very depressing effect upon the system, and it may even prove fatal. But in the case of an abscess of this size it is perfectly safe, even if you inject a stronger solution than that mentioned.

Restoration of Divided Nerves.

CASE 2.—This man, about twenty years of age, has a scar upon the anterior part of the right forearm, three or four centimeters from the wrist joint, and extending more than half way across the palmar surface of the forearm. The injury which gave rise to this scar occurred about nine months ago, and was caused by a piece of glass. When the hand is thrust through a pane of glass it is very apt to divide the arteries of the anterior part of the wrist. You have there the radial artery, which is on the outer or radial side of the flexor carpo radialis; and very often the ulnar artery, lying on the radial side of the flexor carpo ulnaris, also is wounded, and sometimes there is an intermediate artery wounded, which is known as the median artery, an artery which accompanies the median nerve, which in many persons is lost in the forearm, but in some is nearly as large as the radial or ulnar. Thus, sometimes, three arteries require to be ligated in an accident of this kind. As a general rule, where these

arteries are divided, it is best to tie both the proximal and the distal end. This patient does not know whether these arteries require to be tied or not, but the probability is, judging from the course of the scar, the radial artery was injured; the ulnar may have escaped. You will recall the anatomical distribution of the nerves of sensation upon the palmar surface of the fingers. You will remember that the index finger, the middle finger, and the radial side of the ring finger, receive their nerve supply chiefly from a branch of the median nerve; while the ulnar side of the ring finger and both sides of the little finger derive their nerve supply from the ulnar nerve. Now, it is very evident, from the fact that there is more greatly impaired sensibility here in the index finger and middle finger, and to some extent on the radial side of the ring finger, that the median nerve has been divided, and that its function has not been perfectly restored. You know that when a nerve has been divided, and that ends are left in the wound, pretty near each other, they will reunite, and the function of the nerve, as far as the power of sensation is concerned, would be more or less perfectly restored. Unfortunately, where the nerve is divided for the relief of neuralgic pain, the healing of the parts and the restoration of function occur very much too soon for the comfort of the patient. There are a great many cases of neuralgia where division of the nerve gives relief, but after the lapse of a number of days, weeks or months, the pain returns, and that is one of the misfortunes in regard to the treatment of neuralgia by division of nerves. In order to secure persistent benefit from the operation you not only have to divide the nerve, but excise a very considerable portion of it. Even then there is doubt with regard to the permanence of the cure. The impairment of sensibility and of mobility is what this patient complains of. He can bend his fingers, but he cannot bend his thumb. The probability is that the nervous supply of the muscles of the thumb has been cut off, and it has not been largely restored by anastomosis, for the anastomosis of nerves is by no means as perfect, so far as function is concerned, as is the anastomosis of arteries. You will observe that when the patient attempts to move the thumb, he moves the first phalanx of the thumb chiefly by the action of the flexor brevis, the short muscle which constitutes the upper part of the thenar eminence of the hand. That muscle has not been deprived of its muscular power, but the flexor longus pollicis has been deprived of its power, as he is unable to flex the last phalanx of the thumb.

With regard to restoring the function of divided nerves, there is a difference between the nerves of sensation and those of motion. Restoration of the function of sensation takes place to a much greater degree than that of motion. When the motor nerves have been divided there is much less chance of the patient regaining lost power of function than there is in the case of sensation. It would seem there is more active nervous power required for a nerve of motion than one of sensation; at all events, the fact, I believe, is a general one, that the restoration of motor function is much less perfect than that of sensation.

As said, he cannot bend the distal phalanx of the thumb, and I fear nothing can be done to restore that lost function. If he were suffering from any intense pain we might cut down and expose the nerves at the seat of the injury, and if any bulbous expansion were found, dissect it out. We sometimes find an expansion on divided nerves, rendering them the seat of pain, and the excision of such expanded portions will often give relief, and more often give relief which will be permanent. You cannot, however, absolutely rely upon the relief being permanent. This patient does not suffer sufficiently to require such an operation.

Bone Sequestrum.

CASE 3.—Some of you may have seen this patient before. She was under treatment several months since, in the Presbyterian Hospital, where I removed from the upper portion of the sternum a piece of bone. There was caries of the bone and a small sequestrum in the midst of the carious tissue. You know that sequestra do not usually form in spongy bone. It occurs, for the most part, in the compact tissue of bones, as in the flat bones and the long bones of the extremities. Spongy bones, like the vertebrae, etc., are apt to undergo caries, but you do not often find sequestra there. In this case, however, there was a mass of dead bone, which I removed. I was in hopes the wound would granulate and heal, but the healing process has been very tedious. At present you can see a considerable portion of dead bone in the midst of the spongy tissue. You occasionally see small sequestra like this in the femur, in the advanced stage of morbus coxarius. She is dressing the sore with carbolic oil put on lint. When I did the first operation for the removal of the dead portion of bone I found, on introducing the finger into the opening, that it extended back into the mediastinal space. There was some danger of matter burrowing downward and forming a sinus, but probably the previous inflammation had caused more or less adhesion of the cellular tissue, which prevented any extensive burrowing of matter. It is a situation, of course, in which you cannot very well make a counter-opening; that is, unless there is some very urgent reason for it. It would not be desirable to make an opening down into the mediastinal space unless extreme urgency of the symptoms demanded it. There is some suspicion of syphilis in this case. A great many wives are infected by their husbands without their knowledge, and while we cannot diagnose with any certainty the existence of syphilis here, it is to be suspected. Where there is caries of the bones, as in this case, but no syphilitic eruptions affecting the skin and mucous membranes can be found, we are obliged to remain in some doubt as to the diagnosis of syphilitic disease. It is always safe, however, to make moderately free use of the iodide of potassium, and very often, with advantage also, use the chloride or biniodide of mercury. In doubtful cases, while watching them carefully, it is well to give the patient the benefit of the doubt, and use the remedies which would be likely to give relief if the suspicions were well founded.

Counter-irritation.

CASE 4.—This aged gentleman has for some time been troubled with a deep-seated pain in the upper and fore part of the arm. On a previous occasion I cauterized it at a number of points, which caused so much relief that he desires the cautery reapplied at a part where there is still some pain and tenderness on pressure. The cautery which I used on this occasion is one which you see very exceptionally. It was not originated by myself, but by Dr. Thorp, who, on seeing me use a small cautery applied at several points, grouped together a number of short wires, and these, heated to a moderately red heat, enables one, instead of making six different burns, to make six burns at one time. If you heat these to a strong heat you make one large scar by burning the intervening portion of integument. But heating it moderately, a number of small scars are made, and for many purposes a cautery used in this manner is preferable to the larger cautery, which is applied by a ball- or wedge-shaped or conical instrument, as the case may be. A person with a moderate degree of firmness can bear the cautery applied in this manner without taking ether. But where the cautery is to be applied to a number of places it is rather a severe ordeal to go through with without an anæsthetic. I have had this applied to myself a number of times, and found it a most effectual means of arresting the gangrenous tendency at the seat of a furuncle. I heat this and press on it hard enough to make it go through the skin into the subcutaneous tissue. The amount of irritation following it is very moderate indeed. I think, upon the whole, I like the multiple cautery heated upon the spirit lamp very much more than the Paqueline cautery, heated by benzine. For some purposes, however, the latter is to be preferred. You should have the lamp near by, so that the cautery will not cool too greatly while being carried through the air.

Last Saturday I was consulted about a case by one of the attending physicians at the Presbyterian Hospital, the patient having a chronic inflammation over the dorsal surface of the wrist, extending some distance upon the forearm and down upon the hand. There was very great induration and pain. I suggested the use of the actual cautery, and it was applied in a number of places, carried through the skin into the cellular tissue. There has been a very marked improvement in the condition of the patient. He has suffered much less pain; there is less induration than there was, and the prognosis is much better. I think that in almost all cases of chronic inflammation about joints, especially where the inflammation is attended by a great deal of induration of the surrounding tissues, you will find much benefit from this mode of treatment.

The best means of arresting the burning sensation after the application of the heated wire is a strong solution of bicarbonate of soda. It acts like a charm. It is not necessary to apply it longer than the first day, after which an ointment of a drachm of the extract of stramonium to the ounce of vaseline may be used as a dressing. The narcotic effect of the stramonium will act advantageously in relieving the pain at the seat of the cauterization.

There are many medical men who attach no importance to the use of revulsives or counter-irritants, because they do not know how to explain the manner in which they produce their effect in relieving pain or disease. There are some minds so constituted that they will not admit a fact the reason of which they cannot explain. There are many facts, however, which we have to learn by practical experience and observation, and if we cannot go any further than to ascertain the fact that we can produce relief by a certain remedy, not being able to explain the *modus operandi*, there is no reason why we should not use that remedy. It is desirable we should go further if we can, and explain the *modus operandi*; we do know the fact, however, that revulsives, whether in the form of sinapisms, or blisters of cantharides, etc., or the actual cautery, do in many instances relieve deep-seated pain and deep-seated morbid processes other than mere pain. The establishment of an irritation upon the surface, immediately above the diseased part, will very often relieve irritations and morbid processes going on at a depth from the surface. There may be a difference of opinion as to the manner in which that effect is produced, but I think you will, in the course of your future experience, find that a very large number of cases are greatly relieved by such remedies. You take one of the simplest cases in which this class of remedies gives relief; a person has a severe pain in the bowels; apply a large mustard plaster over the surface; a burning sensation is produced, and the internal pain, in a large number of cases, is immediately relieved. Of course, if you can get at the seat of the trouble and relieve it by a more radical remedy, which aims at the cause of the pain, it is the better mode of treatment. Very often pain in the bowels, depending on imperfect digestion, for instance, is almost instantaneously relieved by the use of powdered charcoal, or powdered charcoal combined with bicarbonate of soda and some aromatic. In that case the pain is relieved by removing the cause, by neutralizing the acid with an alkali, absorbing the gases with charcoal, and modifying the sensibility of the part by the aromatic. Very often you will be able to relieve a pain of that kind permanently, avoiding the after ill effects of an anodyne, which relieves the pain by blunting sensation of the parts.

Ulcer of the Leg.

CASE 5.—This man, about forty-five years of age, has a sore upon the upper and outer part of the leg, which, however, is not apparently connected with the bone; but a number of years past I treated him for disease of the lower part of the thigh bone. He says I removed a small sequestrum of bone at that time. The seat of the disease of the thigh bone in this case is very difficult to get at, on account of the presence there of large blood vessels, namely, in the popliteal space. Sometimes, when the sinus leads directly to the seat of the disease, and the sequestrum is of limited extent, one can get hold of it without much danger to the vessels. There is one serious evil arising from a sequestrum in the popliteal space; that is, where the sequestrum is of considerable size and with a jagged extremity,

it is likely to press directly toward the great vessels. There have been several instances in which fatal hemorrhage came from opening of the popliteal artery by the jagged extremity of a sequestrum pressing against it. This patient is not prepared to undergo an operation to-day.

CASE 6.—This patient has a very elongated, ulcerated surface upon the inner side of the leg, which, he says, is the result of a very free incision which was made in the Charity Hospital. I suppose, without showing what the occasion for it was, that he may have had phlegmonous erysipelas, and very free deep incisions are used in that case. It is not very common, however, to make one incision so long as this. It is more common, where there is extensive, deep-seated inflammation and suppuration, to make a number of incisions, which, in the aggregate, would perhaps be as long as this, but leaving intervening integument. This, however, is healing well, and no evil result is to be feared from it. The swelling of the leg has subsided, and all that is required now is to heal the ulcer. I think as good a dressing as he could use for it now is the liquor sodii chlorinati, diluted with eight parts of water. The leg should be raised up on a chair as much as possible.

Anchylosis of Joints.

CASE 7.—This boy was brought here some time ago with a stiff elbow, the result of an injury. It was a case of false ankylosis, and by passive motion, the motion of the joint has been restored in some degree. He can lift the hand to the opposite shoulder and to the head. It can be brought to within an angle of twenty or twenty-five degrees of the right line. But there is resistance beyond that point. Now, with regard to the functions of the elbow joint, although it is desirable the patient should have the power of moving the joint in all directions to the full extent, it is very much more desirable that he should have power of full flexion than of full extension. If the elbow joint is even flexed at a right angle, or an angle a little less than a right angle, the patient has command of the most important movements which can be effected. The hand can be brought freely to the mouth and used for almost all purposes required. On the other hand, if the limb be fixed in a straight or nearly straight position, it is very much less useful to the patient. So that in the treatment of affections of the elbow joint you aim more to secure full flexion than full extension. The course

to be pursued in this case is to persevere in passive motion, and also in active motion, although the patient complains of the pain thereby occasioned. He may carry a pail full of water, or a heavier weight. Raise it up and carry it, thus tending to draw the limb out into a position approaching the straight one. It is important generally, in the treatment of affections of the joints, to study, with regard to each joint, the functions of its articulation, in order that you may have a definite aim in your treatment. Of course, in all practicable cases you aim to restore all the functions of disabled or diseased joints, but there are many cases in which you will fall short of complete success in that respect. Your aim will be, if the result is likely to be imperfect, to place the limb in a position in which it will be most useful to the patient. Now, with regard to the elbow, the position is one of flexion at a right angle. Anything which you can do beyond that, toward restoring motion in every direction is all very desirable, but if you are obliged to be content with a stiff joint, let it be flexed at about a right angle. If it should be the knee joint that is affected, the position should be one that is straight; a perfectly straight position, or very nearly straight. There is a difference of opinion among surgeons, as to whether an absolutely straight position of the knee, or one very nearly straight, is to be preferred. You may say, at all events, that there is no great harm in having a very slight deviation from the straight position, not more than fifteen degrees. As far as walking on level ground is concerned, a perfectly straight knee gives the patient the best support and the greatest facility for motion; but in sitting and in going up and down stairs, a position that is a little flexed is more advantageous. It depends very much upon what the employment is, and the position in life the patient has, whether it is better to have the knee absolutely straight or deviating a little from the straight line. With regard to the other joints, you have, of course, to study the functions of each. If the shoulder is likely to be stiff, it is better to have the arm by the side of the patient than standing off at right angles; if it be the wrist, it is better to have the hand in the supine than in the prone position. In the prone position it will be much more difficult to overcome the deformity than if it be in the supine position, inasmuch as the pronator muscles are very much stronger than the supinators.

EDITORIAL DEPARTMENT.

PERISCOPE.

Tubercle of the Synovial Sheaths of Tendons.

The *Lancet* says that MM. Terrier and Verchère describe a tubercular disease of the synovial sheaths of tendons, which appears to be more common in the hand than in any other part. The tubercular nature of the affection in the cases they report is demonstrated by the microscopical characters of the inflammatory growth

and the concomitance of tubercular disease of the lungs. Premising that the disease may be secondary to tubercular affection of neighboring bones and joints, they draw special attention to the form which occurs primarily in the synovial sheaths. They describe the origin of the affection as insidious, and the progress as very chronic. The first symptom is a swelling over part of a synovial sheath, as, for example, over the palmar surface of a phalanx. This swelling gradually grows and becomes softer; movement of

the part then becomes both painful and limited. Other like swellings appear over other portions of the synovial membrane, as in the palm of the hand and above the wrist. The skin becomes adherent, reddened, and ultimately ulcerates, and pus and sero-pus are discharged; the ulcer extends, its edges being irregular, thin, undermined, and livid. A probe passed to the bottom of the ulcer readily finds a narrow opening into the sheath, along which it may be passed for some distance. The tendons do not slough, nor do they become firmly adherent. The disease does not spread to the neighboring bones and joints; and although in its course more than one part of the synovial membrane is affected, these are separated by quite healthy portions of the membrane, and this fact forms one of the best diagnostic features by which it may be distinguished from fungous disease of the membrane, in which the whole extent of the sheath is always involved. In one of the two cases observed by the authors, there was a very distinct history of an injury as the exciting cause; the patient, a young woman, had cut her wrist severely; and in another case there was a history of a bruise. The constant and rapid movements of the hand are considered to account for the great frequency of the disease there. The only treatment which promises any good seems to be early free removal of the tumors; cases in which this was done with good effect, by Trélat and by Bouilly, are recorded in the paper before us, in the July number of the *Revue de Chirurgie*.

Recovery from Rabies.

The *Lancet* very wisely says:—

On more than one ground the possibility of the recovery of dogs from attacks of rabies is of great importance. The demonstration that this terrible disease is not invariably fatal, even in the animals most prone to it, may at least be welcomed as affording a ray of hope for therapeutics, while the fact of the recovery of affected animals may afford an explanation of many mysterious outbreaks of the disease. M. Decroix lately communicated to the Académie de Médecine nine cases which he had collected, of well authenticated recovery from rabies. (1) M. Ménecier inoculated two dogs and a rabbit with the saliva of a rabid dog; all three died from rabies, but the dog from which the saliva was obtained recovered. (2) Decroix inoculated a dog with the saliva of one suffering from rabies; the latter died, the former became affected with characteristic rabies and recovered. (3) Some saliva was obtained from a man some hours before he died, from hydrophobia, and with it a dog was inoculated; the animal presented well marked symptoms, but recovered. (4) Reg, of Lyons, recorded the recovery of a dog with furious rabies, due to a bite from another rabid animal. (5) A military veterinary surgeon, Laquerrière, has recorded the case of a dog affected in consequence of a bite from an animal unquestionably rabid. The destruction of the dog was ordered, but the owner refused to consent, and the dog recovered without treatment. The four remaining cases were of recovery from rabies, in man in three cases, and in the horse in the

last. Decroix points out that in furious rabies the attacks increase in frequency and intensity during two or three days, then attain their maximum, and disappear in two or three days more, whereas death does not occur until the fifth or sixth day. The eminent authorities who have never met with an instance of recovery are scarcely justified in denying the occurrence of such cases described by those practitioners who have seen them. The Rabies Committee, of which M. Decroix was president, has made, since 1874, a host of experiments with various substances of reputed value in rabies, three of them with pilocarpine, and every supposed remedy which they employed appeared actually to hasten death by the violent paroxysms which it caused. The conclusions of M. Decroix are that it is experimentally demonstrated that rabies may terminate in spontaneous recovery. Up to the present day no agent has made good its claim as a remedy for rabies. The cases of recovery attributed to this or that agent may be, with equal justice, ascribed to the spontaneous termination of the disease. The dogs which recovered in the experiments carried on by the committee were left at rest, and, since the administration of medicines usually provokes convulsive seizures, it seems desirable, according to our present knowledge, to leave persons affected with hydrophobia in the most perfect possible calm, trying experiments only upon animals. In absolute quietude and obscurity the paroxysms are far less terrible than when medicines are administered, and M. Decroix asserts that if these conditions could be secured, he would far rather suffer from hydrophobia than from many other diseases. It may, however, be observed that we are scarcely justified in drawing, from the superior results of therapeutic inactivity in dogs, the same lesson in the case of the disease in man. The administration of a drug to the human sufferer by the skin or rectum, or sometimes even by the mouth, may be effected with far less disturbance than in the case of the dog. Without doubt, however, he is correct in insisting on the absolute importance of perfect tranquillity, and of the avoidance of everything which may in any degree help to excite the paroxysms. It may be doubted also whether dogs are the best subjects for therapeutic experiments, since it is probable that the conditions met with in the human subject obtain more closely in the herbivora than in the carnivora. It is very desirable, in the case of any recovery from rabies, that it should be ascertained at what date the saliva ceases to be infectious, and whether the disease can be communicated after the animal has to all appearance recovered. This is a not improbable explanation of the occasional alleged occurrence of the disease from the bite of healthy animals.

Poisonous Effects of Iodoform.

Dr. Henry E. Clark publishes an article on this subject in the *Glasgow Medical Journal*. He reaches the following conclusions: In all the recorded cases there is pyrexia, marked by extreme irregularity, the temperature running up to 104° F., or even more, and falling again very rapidly to near the normal. The rise invariably

takes place in the evening, but the morning fall is nearly always out of proportion to the evening rise. The pulse is exceedingly rapid and feeble, its rapidity being in great measure independent of the rise of temperature. Dr. Sidney Ringer has found that one-fifth of a grain of iodoform would almost arrest the action of the frog's heart. Nausea, vomiting and loss of appetite are invariable symptoms, the vomiting being persistent and very little relieved by treatment. There is always lassitude, headache and dullness of intellect, and often delirium, which in the worst cases passes into unconsciousness, or is followed by localized paralysis. The symptoms sometimes resemble those of acute meningitis, the patient uttering peculiar cries, rolling his eyes, and the headache being intense. Zeissl describes two cases in which there was an eruption on the flexor aspects of the limbs, having the appearance of erythema in the one, but in the other resembling urticaria; the eruption faded in a few days after ceasing the use of the drug. It is curious that although iodoform is so freely used in a great variety of conditions, and in patients of all ages and constitutions, it so seldom happens that constitutional effects are produced, and we are led to ask what are the circumstances which predispose to the absorption into the system, and the production of general symptoms. Mundy holds that the large quantity employed is the chief factor, and speaks of cases where from 2½ oz. to 10 oz. have been applied at one dressing; certainly, in our case, we could not blame ourselves for the reckless employment of the drug, as only five grains were applied each alternate day. Another point, however, to be noted is the condition of surface to which it is applied; thus, on a free surface, where a great deal of the iodoform is carried into or through the dressing by the discharge, the risk of absorption will be less than in a sinus with only one external opening, where the discharge is pent up and the iodoform may be retained for many days. Nor must it be forgotten that some granulating surfaces are more active than others in absorbing materials from without, healing burns being especially adapted for absorption, which may account for the number of fatalities where this drug has been employed in the treatment of burns. These considerations do not, however, account for all the cases of iodoform poisoning, nor can the plausible suggestion of a writer in the *British Medical Journal*, that the action is cumulative, and that poisonous effects are only produced after long treatment, be entertained, in view of the facts detailed as to the case under our observation. We are driven, indeed, however reluctantly, to the position held by Schede, that there is a peculiar idiosyncrasy, rendering certain persons liable to constitutional effects from the local use of iodoform, and that it is therefore necessary, in all instances where it is used, to carefully watch its effects, and cease its use whenever there is a distinct rise of temperature.

—It is stated that no appointment will be made to the chair of Animal Morphology in the University of Cambridge, rendered vacant by the death of Mr. F. M. Balfour.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—We welcome an addition to the scientific journals of Philadelphia, in a new venture, "*The Druggists' Journal*," a Monthly Publication of *Materia Medica*, Chemistry, Botany and Microscopy," published by George A. Frey & Co., 123 S. Third street, and edited by L. E. Sayre, Ph. G. Mr. Sayre is already known, to both medical and pharmaceutical readers, as the author of an excellent treatise on "*Organic Materia Medica*," and is moreover thoroughly versed in the practical details of his profession. The number before us contains 16 large 8vo pages of reading matter, original and selected, all of solid character. The aim of the "*Druggists' Journal*" will be to publish articles of practical value, to expose impracticable and effete formulas, to aid the student in laboratory work, and to discuss all important questions relating to the policy of the drug trade. The subscription price is \$1.50 per year, and we feel confident that no druggist or doctor will waste his money if he remits for it.

—In a pamphlet entitled "*An Old System and a new Science*," Dr. F. E. Stewart sets forth the reason why, in his opinion, a physician should not prescribe proprietary pharmaceuticals, and also explains the system of "*working bulletins*," which he believes to be the shortest and most effective plan of getting at the value of a new remedy. Those who would like to read his arguments can obtain the pamphlet gratis by addressing the publisher, Mr. George S. Davis, P. O. Box 641, Detroit, Mich.

—Dr. C. Henri Leonard sends us a copy of his "*Multum in Parvo Reference and Dose Book*," as edited to date. The price is 30 cents, and it may be had of the author, Detroit, Mich.

—The value of electrolysis in the treatment of stricture of the urethra, seems to be amply demonstrated by the facts set forth in a pamphlet on the subject, by Dr. Robert Newman, of New York. Among hundreds of cases which he has treated he did not have occasion to resort to any other method, and what is more, the results were permanently satisfactory. Copies may be had of the author, 68 West 35th street, New York City.

—The Minister of Public Education, of Russia, has found that the experiment of giving elementary instruction in medicine at the municipal schools of St. Petersburg has been so successful that he has authorized its extension to all the municipal schools throughout the empire.

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 A WEEKLY JOURNAL,
 Issued every Saturday.

D. G. BRINTON, M.D., EDITOR.

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VACCINATION AND ITS RESULTS.

From time to time the opposition to vaccination which is always prevalent in the uneducated and superstitious masses, crops out in the more educated, and even in the profession itself. We would not attribute this to deliberate perversity or desire for notoriety. There are minds so constituted that they will adopt an opinion without examination, and then labor earnestly to prove its correctness. Others, again, are impressed by one or two isolated facts, and can only see other facts which give one interpretation to these. Such minds are color-blind as to statistics and high-gravel blind as to logic.

The opponents of vaccination are treated to an excellent article, in *The American*, Sept. 2, from the pen of Dr. HENRY HARTSHORNE, but one the excellence of which they will unwillingly appreciate. He reviews, in a masterly manner, the late anti-vaccination writings of Dr. CHARLES T. PEARCE, P. A. TAYLOR, HENRY BERGH and others, setting forth in a perfectly clear style the unfairness with which they handle statistics, and

the baselessness of many of their confident statements.

The results of vaccination are, indeed, so sun-clear that it is really a psychological puzzle to understand how any person who studies them can harbor an honest doubt as to the benefit of the practice. Dr. HARTSHORNE puts them in a nutshell, in the following comparison of deaths nowadays and in the last century:—

Look at the later statistics of the United States, obtained by our National Board of Health in 1881. Sixty six cities and towns in this country yielded, during that year, in all, 4000 deaths from smallpox. As crowded cities always furnish much the largest number of cases of such diseases, it is not probable that more than a thousand deaths (representing from five to ten thousand cases) occurred outside of the reported cities. Suppose, then, five thousand deaths in more than fifty millions of people. This is one hundred deaths to each million of population. For fear, however, that we have under-estimated the deaths in rural localities, let us add to it, double or treble it—make it, say, *three hundred* to the million living. But, as Dr. Fothergill and Sir Gilbert Blane calculated, upon good evidence, the death-rate from smallpox in Great Britain for thirty years before vaccination was introduced by Jenner, was *three thousand* in every million of the population. Well may it be conceded that the mortality (besides the often hideous disfigurements, blindness and deafness resulting) of smallpox has been lessened since the day of Jenner. Put, again, alongside of the above statements, the almost total absence of smallpox from such a country as Ireland, in some recent years (1866, 1867, 1868, 1869), and the official record in the report of the Massachusetts Board of Health, just issued, of the occurrence of but *two deaths* from smallpox in so large a city as Boston, in eight years—1873 to 1881.

It would take a physician with a singularly elastic conscience to say anything against vaccination after reading the above passage. He must be strangely unaware of the responsibility he incurs, if, in the face of these facts, he throws the weight of his influence against this safeguard.

Indeed, the profession, as such, ought to insist on compulsory vaccination and revaccination every decade of life. The danger has been shown to be null, the protection positive. The duty that, in society, every individual owes to his neighbor is serious enough to justify the State in demanding that he shall submit to this operation as often as the best authorities on the subject pronounce it necessary. As in other matters, if people will not submit to reason, and by

their refusal endanger others, the strong arm of force should be laid upon them.

Personal prejudices are not personal rights, and may be indulged only when they do not compromise the safety of others. Hence we are earnestly in favor of a positive enforcement of vaccination by legal statute in every State in the Union.

THE THREATENED CHOLERA EPIDEMIC.

There has been an uneasy feeling in the United States this summer, that we are on the verge of some serious epidemic. The lateness of the season justifies us now in dismissing these fears, but only for the time being.

In several localities cases with all the symptoms of Asiatic cholera have been reported. One of these, quite lately, was in Michigan, another at Newport, R. I., and they made considerable stir. It is very true that Asiatic cholera is raging with great severity at Manilla; it has been recently at Aden, on the Red Sea; and isolated or sporadic cases are reported at many other places, including those in our own country. It is not unusual here, however, to find severe cases of "cholera morbus" reported as Asiatic cholera, and this may be so in the case of the little boy who died at Newport. If there is anything in the seeming periodicity of Asiatic cholera, it is not due in the vicinity of Philadelphia prior to 1883. The well marked epidemics of that disease in this city, beginning with the memorable infliction of 1832, have been at intervals of about seventeen years—as thus, 1832, 1849, 1866. This seeming periodicity, of course, may be mere accident; but if there is anything in it, 1882 is not a cholera year, while 1883 may well be one.

It behooves the authorities, therefore, to be on their guard, and early next summer to take efficient precautions to prevent the pestilence landing on our shores. This is easier than fighting it after it is here.

In spite of every effort, no satisfactory treatment of cholera has yet been discovered. Its fatality is about the same as ever, and that is very

high, especially in the earlier weeks of its outbreak.

Preventive measures, on the other hand, have yielded excellent results. Quarantine and sanitation judiciously, and firmly enforced, have controlled its march with a pleasing certainty. But no tampering with hypothetical objections to them is safe. Isolation, segregation and cleanliness are what are demanded.

The periodicity of epidemics is an established fact, the causes of which were ably set forth by Dr. DE CANDOLLE, of Geneva, in a monograph on the subject, published some years ago. We are not, however, yet in a position to predict their return at given epochs. The vital statistics of the world are far too limited to permit this; but each year yields new facts confirmatory of the theory. Therefore, let us be on the alert for the possibilities of 1883.

CONTRIBUTION TO OUR KNOWLEDGE OF THE PERIPHERAL TEMPERATURE OF THE HUMAN BODY.

In his thesis for graduation at the University of Tübingen, Dr. A. RÖMER has reported at length certain thermometrical observations on the temperature of the human body, made on himself. Of this careful work we find, in the *Centrbl. f. d. Med. Wissensch.*, 1882, No. 46, the following extract, made by Prof. SENATOR:—

RÖMER, while living as regularly as possible, first made some observations while holding the instrument in his hand. He found, during the course of the day, far greater variations in the hollow of the hand than in the rectum, where the temperature was taken at the same time. In the former, these variations reached 6.10° C.; in the latter, 1.21° C., only. Notwithstanding outside conditions were the same, sometimes within twenty minutes the temperature in the hollow of the hand varied more than 2° , yes, even 3° , while at other times it continued nearly the same. A carefully kept record resulted in the interesting fact, that there exist certain variations at certain times during the day, but on some days the maxima and minima appeared somewhat earlier and were not quite so great.

The course of the daily curve was found to be about as follows: After the temperature has been comparatively high during the night, in the morning, at 6 o'clock, a rapid fall takes place, reaching its minimum between 9 and 10 o'clock; then a gradual increase takes place, reaching its maximum soon after dinner; between 1 and 3 o'clock, again, a rapid fall ensues, so that from two to three hours later another minimum is reached. Between 6 and 8 o'clock the temperature begins again rapidly to ascend, and only toward morning somewhat slowly declines again. This daily curve of the external temperature is in opposition to the rectal temperature, when compared with the daily medium. The latter shows, from the morning at 8 o'clock, till the evening at 9 o'clock, a higher temperature, but during all the other time of the twenty-four hours a lower one than the medium, while, with a few exceptions, the surface temperature records the opposite. *A rapid fall on the surface corresponds to a rapid increase in the interior, and vice versa*, only during the transitions apparently an exception takes place, and the variations in the hollow of the hand appear about two hours earlier than those in the rectum, and happen once in the day oftener.

Other variations noted, and which have formerly been observed already, are the following: The lifting of the arm causes a slight fall, the dropping of the arm a slight increase of the temperature in the hollow of the hand; impeding the venous or arterial circulation produces a rapid decrease; the same also rapid and severe cooling of even distant parts, as the legs. Digestion seems to have an influence after dinner only, but here a considerable one.

Certainly these variations are caused by the regulation of the heat of the body, according to which an increase of temperature in the interior must, in the healthy body, be compensated immediately by variation of heat on the surface. But this compensation is disturbed in disease; so that the thermometrical record in disease is hardly affected by these observations; but the latter teach us not to consider always even considerable variations as a sure indication of disease; and it may be well to always take, in important cases,

the temperature of the rectum, and to make a new number of observations of the human rectal temperature at night, to find out the value of the statement, that even in the earliest prodromic stages of tubercular phthisis the thermometer (on the surface?) shows an increase of at least one degree. If this should be found in the rectum also, and only in such cases, the fact would be of value; but if on the periphery only, then such persons would share this nightly increase of temperature with all healthy human beings.

We further learn from this, with what cautions any so-called diagnostic or pathognomonic sign should be received, and that such sometimes find a totally different explanation, because central experiments were wanting.

CRANIOLOGY OF MURDERERS.

That there is some truth in craniology can alone be seen from the fact that the skulls of the different races are widely different from each other. Drs. HEGER and DALLEMAYNE, in Brussels, have now examined the skulls of a large number of murderers, and published the result of their investigations in detail, in the *Annal. de l'Université de Bruxelles*, 1881, p. 1.

It is impossible for us to mention all the numbers of their measurements, and we must be satisfied with giving our readers a few of the more important results of these investigations. They found that most of the murderers have the posterior part of their skulls (and also of their brains) in comparison, more strongly developed than the front part (but without atrophy of the same), that the brain, as a whole, is generally large, and that, therefore, with them, "the intelligence is not strong enough to withstand their strong impulses." Murderers do not form a special, separate class, but they all possess in their brains and skulls an "inequality born with them." Of all the skulls of such individuals, i. e., quasi-professional murderers, who combined with the murder burglary and robbery, or rather, the latter accidentally with the first, this same want of equal development of skull and brain was noted, and in two who had committed more than one such crime, this remarkable unequal development was espe-

cially apparent. Such men with better education, and their animal impulses guided in a different direction, might have become heroes. Violent impulses, if correctly applied, may lead to great deeds, if not to great crimes. We were present at the dissection of Anton Probst, the murderer of the Deering family, and remember to have noted the same large brain and the same preponderance of the posterior part of it.

NOTES AND COMMENTS.

Hypodermic Injection of Iodoform in Syphilis.

Dr. Ed. Thomann, in Graz, has made a number of experiments to detect the value of hypodermic injections in syphilis, and gives a preliminary statement of the results gained, so far, in an article published in No. 44, 1881, of the *Centrbl. f. d. Med. Wissenschaften*.

He made use of a solution of 20 parts glycerine and six parts iodoform. He began with 0.30 iodoform and the dose increased to 0.75. He employed also a solution of 0.30 iodoform in 6 ctm. sweet almond oil. He took cases in whom, with decided induration, the inguinal gland had also commenced to enlarge greatly. After he had made ten to twelve injections on different parts of the body, he observed, in all his cases, a gradual disappearance of all signs. He found the experiments of Binz and Högges confirmed. They had made theirs on animals. The injections produced almost no pain, or very little only, and the local symptoms were very moderate and by no means as severe as those following injections of corrosive sublimate. None of his patients complained of these hypodermic injections of iodoform.

Within two hours the remedy could be demonstrated in the urine. No disturbance of the general health, no increase of temperature or of rapidity of pulse followed, and the breath did not have the odor of iodoform.

The results are undoubtedly such, that they encourage further experiments. The observations were made in the clinic of Prof. Lipp. Should they prove lasting and uniform, we would possess at last a remedy by which we might be able to prevent the poisoning of the system by lues, and the method would be indicated as soon as the slightest induration of an inguinal gland should denote the beginning absorption of the syphilitic material.

A Cerebral Centrum for the Color Sense.

Since it has been found out that many persons are what is now called color blind, the question has been raised, by Dr. J. Samelsohn, in Cologne, if there does not exist a special centre, somewhere in the brain, for the color-sense. In a short, but very well written article in the *Centrbl. f. d. Med. Wissensch.*, 1882, p. 851, Dr. Samelsohn says, very correctly, that the question might be changed to the following: If there are cases of double-sided hemianopia, in whom the sense for space and light is perfectly intact, while on the respective half-fields of vision the color sense is totally extinguished, Steffen (in *v. Graefe's Arch.* xxvii, 2, p. 6), has found such a case, and remarks: should there exist one similar case—only one solitary one, but one undoubtedly of the same kind—we would have a clear proof that in the main central organ, the brain, the centre for the sense of space and for the sense of color are divided, no matter how near to each other they may be situated, but there is a special centrum for each of these senses.

Samelsohn now had such a case under his charge, exactly like the one published by Steffen, where, in consequence of an apoplectic seizure, the sense of space and light was perfectly intact, but where the color sense was utterly extinguished. He would have published this case sooner, and mentioned it before Steffen's article appeared, in a meeting of his local medical society, but he hoped to be able to give the result of the post-mortem examination; but under the administration of iodide of potash and electricity absorption was established, all the symptoms disappeared, and then a second seizure—due to an enormous effusion—brought about rapidly the fatal end, leaving the brain in a condition where any attempt at finding this centre, under the complicated morbid process, was utterly out of the question. But the fact has now clinically been established, that there exists somewhere in the brain, a special centrum for the color sense.

Nephrectomy for Strumous Disease of Kidneys.

The following case, recorded in the *British Medical Journal*, by Dr. Thomas Cole, illustrates how inaccurate may oftentimes prove the most painstaking diagnosis: A boy of eighteen was admitted into the hospital with the following symptoms: Micturition necessary every two or three hours by day, less often at night, and pain at end of penis after conclusion of act. Urine below normal density, and contains abundant albumen, blood and pus, but no casts nor crystals.

No renal tumor perceptible. The diagnosis was serofulous pyelitis. Rest, good food and tonics materially improved his condition. He subsequently became worse, and a slight enlargement of the right kidney could be detected. Growing rapidly worse, it was decided to perform nephrectomy, but on the day before that set for the operation he became much worse and died. At the post-mortem, the right kidney, which was supposed to be the seat of disease, was found only slightly enlarged, containing numerous abscesses but no inflammation of pelvis, while the left kidney (which, in the event of operation, would have been relied on to perform the work of two), consisted only of dilated calices, and had almost disappeared, weighing only one ounce and a half, and measuring two and a half inches in length and one in breadth. It was surrounded by an abscess, which extended down beneath the psoas fascia to Poupart's ligament. Had the operation been performed, it would have been necessarily immediately fatal.

Cystosarcoma Phylloides.

Dr. C. Friedländer remarks, in No. 46, 1882, of the *Centralbl. f. d. Med. Wissensch.*, that the cystosarcoma mammae was first described by Joh. Müller, who mentioned as its special characteristics, that it consisted of papillary excrescences, which could easily be lifted out. Friedländer then cites a case reported by H. Chiari, in the *Wien. Med. Jahrb.*, 1881, p. 1. A tumor of the size of a walnut was extirpated from the parotid, in several pieces; it had been growing for two years. The pieces were dense, and consisted of a hard, sinew-like tissue on one side, and of a gland-like structure, with fine linear spaces, on the other. Out of these spaces the same papillary excrescences could be lifted, as above mentioned. After a microscopical examination Chiari pronounced the tumor to be an adenomyxoma. Three weeks after the operation the patient died, of erysipelas. At the post-mortem several metastatic nodules, up to the size of a walnut, were found in the lungs. They presented, under the microscope, the same histological structure as the tumor of the parotid.

Curare in Epilepsy.

Dr. Kunze highly recommends this powerful substance in the treatment of epilepsy (*Journ. de Therap.*). He obtained nine perfect cures in thirty-five cases. The facts reported by him prove that even at advanced stages of the dis-

ease, when the intelligence is somewhat affected, complete cure is sometimes obtained and partial return of the intellectual faculties ensues.

Edelfren, encouraged by these observations, has given curare in confirmed cases, for the bromides, associated or not with atropia, are not always successful. He adopts the following prescription of Kunze:—

R.	Curare,	grs. viias	
	Aque destill.,	3j-℥xx	
	Ac. muriatic.,	gtt. j.	M.

He injects, once every five days, about ten minims of this solution. In his hands the hypodermic injection has never been followed by inflammation or any toxic symptoms.

Locomotor Ataxy, of Syphilitic Origin.

When M. Vulpian asserted that almost one-half (40 per cent.) of the cases of locomotor ataxy were of syphilitic origin the proportion was considered to be much exaggerated; but since that period the researches and observations of M. Fournier have demonstrated that M. Vulpian's affirmation was correct, and that the proportion given was rather under than above the actual number of cases. According to M. Fournier, in almost all cases syphilis has a part in the production of locomotor ataxy, and he gives the following rules regarding the management of the case: 1st. Always seek for any manifestations of syphilis in cases of locomotor ataxy. 2d. If such exist institute immediately prolonged and severe anti-syphilitic treatment. 3d. Syphilis should be energetically treated from the début, so as to prevent the occurrence of such serious accidents later on.

Iodoform in Tuberculous Pharyngitis.

At a recent meeting of the Soc. Médic. des Hôpitaux, M. Gouguenheim related the facts of a case of tuberculous ulceration of the pharynx cured by applications of iodoform. The different forms of tuberculous angina, well described by M. Isambert, were considered by him as fatal. In M. Gouguenheim's observations, applications of iodoform very rapidly induced cures of the ulcerations; it is true they recurred twice, but at present they seem to have definitively disappeared. M. Gouguenheim employs a solution of iodoform in ether, but insufflations of the powdered drug may be directly used on the ulcerations. He concludes, from his observations, that iodoform is a powerful modifying agent when applied to tuberculous ulcerations.

Iron in the Urine.

It is well known that muriatic acid, when added to urine, causes a dark brown-colored uric acid to be set free. Dr. Kunkel (*Würzburger Phys. Med. Ges.*, 1881, A.) has detected that the coloring matter contains iron. But not all the iron is removed in this manner out of the urine, even not if urate of sodium and acid are added repeatedly.

Kunkel was able, also, to get out of melanotic tumors a black coloring matter containing iron. He extracted the finely powdered substance and precipitated the solution with muriatic acid. Salkowski supposes that the iron was connected with impure albumen.

A Gall Bladder of Enormous Size.

The following interesting and perhaps unique case is described by Dr. B. Stiller in the *Pester Med.-Chirurg. Presse*, 1882, No. 38:—

A woman, aged 64, presented a tumor which, beginning at the right axillary line and extending diagonally toward the middle line of the abdomen, reached as far down almost as the symphysis pubis. This immense swelling was found to be an enlargement of the gall bladder. Stiller detected, at the post-mortem examination, that on the lower surface of the liver a carcinoma had grown, which compressed the ductus choledochus, causing this undoubtedly unique enlargement.

NEWS AND MISCELLANY.

British Medical Association—Meetings of Sections. SECTION OF PUBLIC MEDICINE.

The address in this Section was delivered by Dr. Alfred Carpenter. He contended that a large portion of the rapid growth of the British Medical Association has come to pass because its foundation was intimately associated with inquiry into the causation and prevention of disease, and the application of the principles which regulate the health of the general public. When our founder put forth his programme there was no general Association for the furtherance of these objects, which, to my mind, have revolutionized the system of medicine. The prospectus which he published in 1832, put forth, as a *raison d'être*, "The investigation of the modifications of endemic and epidemic diseases in different situations, so as to trace their connection with peculiarities of soil and climate, or with localities, habits and occupations of the people." I claim the object which is stated in this paragraph, in his prospectus, as the principal lever by which the success of his movement has been achieved. The whole of the five points contained in his syllabus could only be obtained by a combina-

tion of persons, and the mutual support which observers over large areas could afford; but not one equalled in importance that which is now known as the science of preventive medicine, and which is contained in two of the five points advocated by Sir Charles Hastings. We may, therefore, fairly assume that the benefits which the British Medical Association has been instrumental in producing have been enormously enhanced by this part of our founder's programme; and that, of the five points of his syllabus, those connected with preventive medicine held, and will continue to hold, the most important place, because they are bonds which are most capable of uniting us together in a general brotherhood for one common beneficial and unselfish object, while they unite us most directly with the public at large, for it is the only Section to which, at its meetings, the outside public are admitted.

I propose, with your permission, to review very shortly the sanitary work which has been directly performed by the Association.

In the first volume of *Transactions* there are some valuable observations upon the objects and modes of medical investigation, by Dr. Barlow, of Bath, and with it is a proposal by Dr. J. Conolly, of Warwick, to establish County Natural History Societies, for ascertaining in all localities what states are productive of disease or conducive to health; thus connecting our own particular work with the objects and transactions of the Association. There is also a valuable report upon the state of disease in the city of Worcester during the year 1832, by Dr. R. N. Streeten, of this city.

The second volume contains papers upon the "Variations in the production of certain diseases not usually supposed subject to epidemic influence," and upon cholera. In the third volume are observations upon cholera as it occurred in Bristol.

In the fifth volume appears an article on "Glanders in the Human Subject," by Dr. James Johnston. The writer does not allege that he was the first to draw attention to the subject, for he refers to cases published by Mr. Travers, Dr. Elliotson, Mr. Massey, of Nottingham, and others on the continent, but he says that the materials at hand were scanty. He connects the cases with farcy, and points out its likeness to gonorrhoea and syphilis, and draws attention to the effect upon human beings of matter from animals, which at that time was supposed to be unlikely to happen, the opinion of most physiologists being that there was an absolute barrier between the two classes of creatures, notwithstanding the evidence afforded by Ceely's observations. It was a good work, associating disease in man with its factor in the animal kingdom, so as to bring that connection forcibly to our notice, and to popularize the idea in the minds of the profession. It has helped to bring forth important fruit. The same volume contains a masterly report upon the then condition of medical relief for sick paupers, by the Messrs. Rumsey and Robert Ceely, which, with a paper by Dr. J. Yellowley, addressed to Lord John Russell, was greatly instrumental in drawing attention to the terrible evils under which at that time the poor of the land were placed by the local authorities,

and to the serfdom under which medical men labored, who were appointed to attend upon the poor. This serfdom could not, but for our Association, have been fully exposed to public view. In those days, there were no local newspapers to ventilate the grievances of the oppressed local doctor. The medical press had a very limited influence, and was seldom read by others than a small body of medical men, who were without any kind of political power; for which reason, time serving politicians scarcely cared to trouble themselves with us and our complaints.

In the sixth volume is a report upon "Influenza or Epidemic Catarrh," which appeared so mysteriously in the winter of 1836-7, and, but for the Association, would have left very little record of its infliction. The Council issued a circular to the members, requesting information as to the origin, progress and duration of the epidemic; the atmospheric phenomena preceding and attending it. A most elaborate report occupying sixty-seven pages of the sixth volume, was drawn up on these answers. A chart with dotted and shaded lines shows the apparent alliance between the fall of temperature and the rise of influenza; but the supposed influences are shown to be checked, by evidence obtained from many parts of the country; they did not stand in the relation of cause and effect, for the conditions were present in some places, but were not accompanied by the influenza. The consideration of the condition of the public health occupied an important position in the proceedings, for the following resolutions were adopted at the annual meeting at Cheltenham, in 1837:—

1. That it appears desirable to this meeting that the members of the Association, in their several localities, should urge upon the members of legislature the importance of an enlightened consideration of the question touching public health, now pending in Parliament.

2. That the meeting suggests to the members generally the propriety of lending their aid to carry into effect the Act which has recently passed the legislature, to produce an improved registration of births, deaths, and fatal disease.

3. That, as the Association feels persuaded that an extensive series of observations, made in the various sanitary institutions of the kingdom, would contribute especially to the progress of medical science, a committee be appointed to draw up tabular forms for statistical records of disease.

The address on "Medicine," before the Association, read by Dr. Malden, in 1838, dealt largely with the questions of causation and prevention, and a large portion of the *Transactions* of this year is devoted to Medical Topography. The meeting held in Liverpool, in 1839, is noted for the attention given to hygiene. The president dwelt very forcibly upon public health, remarking, "We have to consider various and important subjects; one of them is that of hygiene, a study in this country, comparatively overlooked; surely it must be considered no small part of the duty of a medical man to preserve health, as well as to combat disease, and this can only be done by vigilantly observing and making known local circumstances which lead to it."

A Public Medicine Section was first organized

at the Oxford meeting, in 1868, and has been regularly instituted since that date. In 1875 I had the distinguished honor of reading an address upon Public Medicine, a position which that subject occupied for the first time at the Sheffield meeting.

The impetus given to original research by the Scientific Grants Committee, the foundation of the Hastings medal, the registration of disease, as suggested by my distinguished predecessor in this chair, Dr. Ransome, and especially the establishment of examinations in subjects relating to public health at our Universities, have tended to help forward the good work. The latter is especially due to the enlightened men who have acted as your guides upon the Committee of Council, assisted by those who have been placed at the head of the staff of the *British Medical Journal*. The position that sanitary science and preventive medicine now occupies in the estimation of the public is due, in a great measure, to the steps which Sir Charles Hastings took when he founded the Association, fifty years ago; and in his honor, as well as for the public good, I ask you to assist to render it all that can be desired that it should become. Time would fail me to refer to all the works connected with our subject; but with an able editor of our journal, especially devoted to hygiene, and who lets no opportunity slip of promoting those objects which especially belong to our branch of the Association work, there must be a great future in store for us; and the revolution in medicine which a study of prevention is likely to effect may be nearer than most of us suppose to be the case. Our successors in this work, who will occupy our places fifty years hence, will then, perhaps, be able to give a tribute to our memory, not on a par with that which we wish to bestow upon our founders, but one which will tell to future generations that we have not been false to the trust which we have undertaken to perform.

SECTION OF OPHTHALMOLOGY.

The address in this Section was delivered by Dr. James Vose Solomon. Contributions to Ophthalmology used to constitute a part of the proceedings of the Section of Surgery, and it was not until 1880 that a separate section was created. In June of that year the Ophthalmological Society of the United Kingdom was founded. At the recent International Medical Congress it was stated by Dr. Horner that he had reduced, by the employment of antiseptics, his cases of suppurative after the operation for cataract, to a fraction over one per cent. as compared with six per cent. I assume that to have obtained such satisfactory results special care must have been taken to exclude patients suffering from diabetes, renal degenerative changes, or advanced atheroma. When we have doubts of the patient's reparative powers to heal the incision by primary union, Dessmarre's operation of sub-conjunctival extraction, with the modern improvements as to length of corneal incision and treatment of the iris, is well worthy of adoption. In a case of diabetic cataract I have lately had recourse to reclinication, and obtained a good result as to vision. The steps of the operation are facilitated and obtain greater precision by the employment of two

needles; one being passed through the cornea, in order to press the lens back to a sufficient distance from the iris to allow of the scleral instrument being brought in front of the lens without entanglement in its capsule or the iritic structure. At the Birmingham Eye Hospital the extractions are dressed with pads of absorbent cotton-wool, medicated by boracic acid. Sappuration of the flap after a cataract operation has been sometimes traced to dietetic poverty.

There is an exceedingly rare complication of hard cataract which deserves notice, and in which extraction affords success. We have no indication of its presence until we are in the act of making our flap, when we are surprised to find that the aqueous humor continues to flow, in freedom and quantity quite unusual, and also that the sclera presents wrinkles before the section is finished, and when completed we have before us a collapsed bag, the cataract lying far back. I have operated in two cases, one of whom was a female dwarf, the other, a male fifty-four years of age; recovery took place without a bad symptom, and the vision was good for the reading and correspondence required in a large business.

Of late, the subjects of intra-ocular tension and glaucoma have excited renewed attention in respect to the changes of position and structure of some of the parts that are concerned in effecting the normal filtration of the intra-ocular fluids, and especially to the surgical methods best adapted for the relief of various phases of the glaucomatous process. A new operation will be described to us by Dr. Grossman.

It is just twenty years ago since I combated the then prevalent dictum that all cases of excess of tension necessitated an iridectomy, and declared that my experience justified me in asserting that the recurrence of tension after an iridectomy performed for the relief of chronic or subacute glaucoma "may generally be completely overcome without resorting to a second or third iridectomy, as advised by Von Gräfe.

There are some other subjects to be brought before us, which, were it not that the present epoch has been endowed with the immortal discovery of the ophthalmoscope by Helmholtz, would have been impossible of elucidation. Mr. Nettleship will open a discussion on the question, To what extent do the signs derived from the examination of the eye and its appendages contribute to the localization of central nervous diseases? Dr. Gowers and other eminent brethren are expected to take part in the discussion. The application of the ophthalmoscope to the diagnosis and treatment of errors of refraction will be treated in a paper by Mr. Juler. Mr. Priestly Smith has a new perimeter to show, and, for discussion, a curiously interesting medical case.

Gentlemen, I have detained you too long, and wearied you, I fear. Let me assure you that I would gladly have spared you these pains had not that obdurate and cruel tyrant, precedent, dominated and enslaved me. I have, I confess, not altogether unwittingly followed it; for the position I now occupy, by the favor of my brethren, only falls once in a lifetime to the lot of any of us. I am old enough, as many of us are—so rapid

has been the advance—to remember ophthalmic surgery as taught by Lawrence, Tyrrrel, Mackenzie and Guthrie. How obscure did they leave much of the *rationale* of many eye diseases; how helpless and imperfect much of their treatment! Minute anatomy, physics, and applied mathematics have changed all that. We can now retort to those who sneer at the varieties of medicine by pointing to our little domain, the privileged home of an almost exact science. That it is so, the labors of this Section will, I feel certain, help to prove; and to that demonstration, gentlemen, I cordially invite you.

SECTION OF OTOTOLOGY.

The address was delivered by Dr. W. Laird Purves, who said that, as far as known methods of examination go, we have embraced every one which can assist us in the determination of structural change. The auricle, the meatus, the membrana tympani, the tympanic cavity to a certain extent, with the naso-pharyngeal cavity and the Eustachian tube, are all under observation as exact as any part of the body. By the use of mirrors, of microscopes, and of specula, we have within the last few years been able to determine changes of the structure, of the position, and of the mobility of those organs which were before a sealed book. By the use of auscultation, bougies, and currents, we determine the existence of extravasations, the patency of tubes, the alterations in equilibrium. But beyond these the actual demonstration of the integrity or impairment of structure has not arrived.

For the purpose of exactly determining abnormal changes of function, it is necessary that we should have some standards of the normal power. In this respect we are deficient. The determinations at which we should strive to arrive may be classed as those which ascertain. We require tables giving us the results of determinations of acuteness of hearing at certain ages, for fluctuating conditions of atmosphere, for different dimensions of rooms in which the observations are made, for conditions of the body at the time, as to general, muscular, nervous or circulatory states, apart from localized aural conditions. We have not any satisfactory instrument for judging the power of the voice, which would give us the best and most useful of all tests. Nor have we a ready plan of ascertaining the exact amplitude of fork-vibrations to which the nerve does not respond. The determination of the field of audition claims attention. The range of audition, *i. e.*, the range of vibrating pitch determinable by the patient under the same conditions. This sense corresponds to color perception, and if its further study will give us results corresponding to those obtained by the abnormalities of color perception in various general nervous affections, it would add to the exactitude of the diagnosis of those obscure diseases.

The power of judging the direction of sounds is, perhaps, not one of much importance in a civilized state, but it is a subject of interest and worthy of research.

For practical purposes, the recognition of timbre and the duration of impression do not call so much on our attention as the accommodation of the ear. This has, as yet, as far as I know,

baffled determination, and yet it is one of the most common complaints of weakness and age. When arising from a general condition, such as anæmia or diphtheria, we have a clue as to its extent by determining the loss of accommodation from which the sister organ suffers; but, in cases of local change, apart from general loss, I know of no standard.

These embrace the principal tests which should be made in the healthy, from which we could make deductions as to functional changes. We have a mass of information upon some of these points, while on others our knowledge is meagre. Some of these examinations may seem superfluous, and lead us at present to no apparent practical profit to those claiming our aid. Let us remember how seemingly disjointed fragments of physical science, collected by workers with different aims, every now and again receive, by one fresh ray of light being thrown on the whole, a new and general connection and bearing to each other, verifying the belief that all observations of an exact kind will certainly be turned to account some day, and often when least expected.

Are our therapeutical means in a more satisfactory state than our methods of diagnosis? As far as operative interference goes, they will, I believe, compare favorably with any branch of surgery. The results of manipulative interference on the membranes, the throat, the tubes, the cavities, are often marvelous. When we call to mind the benefits derived from restoring tension, removing obstructions, dilating tubes, renewing equilibrium, altering the position of pressure, or varying the calibre of the resonator, we may rest assured that the knowledge and proper application of these operations will give succor to those in need, and satisfaction to ourselves.

There is one agency which ought, I think, to be more carefully cultivated than it is at present, and that is, electricity. Seemingly of no benefit in the majority of cases in which it has been used by me as a therapeutical power, cases now and again arise in which the benefit rendered has been great. With such cases before us we should not despair of being able shortly to diagnose the cases in which it is of service, and prescribe it with gratifying effect.

Failing in curative means, we turn to artificial aids, to the conduction, collection, or magnifying of the motions perceptible by the ear. The name and form of these is legion, and yet they come. The utility of what we have hitherto employed has been great, but I have no hesitation in saying that the application of the discoveries of the last few years will shortly develop aids to the deaf which will far outshine the advantages hitherto afforded by those in common use. Remembering that, even with the absolute destruction of the external and middle ears as a functional apparatus, we have other highways by which we can arouse the acoustic nerve to sonorous vibrations, and recollecting that we have now methods of magnifying these, of collecting them, of producing different tensions, and of vibrating membranes, as shown by microphones, resonators, and telephones. I trust the day is not far distant in which a healthy acoustic, and even a somewhat degenerated one, can be supplied with apparatus which will make it almost independent

of the natural conducting apparatus of the ear. Nor do my hopes flag here. To that being who claims our pity beyond even those who seek our aid, who has but one avenue to the soul unclosed, the loss of which would cause a moral death, to the deaf-mute, I believe there is hope. Seeing the strides which our knowledge of vibrations is making daily, and the astounding results obtained thereby, I see every reason to hope that some method of amplifying and rendering such vibrations visible to the eye may be devised, which may render his intercourse with his fellow-beings easy and profitable.

Looking, then, around at what has been achieved in our specialty, and taking that as an earnest of the advantages which we are able to dispense to suffering humanity, I invite you to the discussion of the subjects prescribed by the Executive Committee: trusting, by the collection and comparison of the experiences of members, to forward each other in assisting to place the distressed, not only in a condition free from physical torment, but in a position by which intellectual culture and recreation can only be attained.

SECTION OF PATHOLOGY.

The address in this Section was delivered by Dr. J. Hughlings Jackson, who commenced by stating that "Pathology is the basis of every rational system of therapeutics." To those who are quietly and laboriously working at what may, superficially looked on, seem to be obscure pathological problems, steady advances in diagnosis and rational therapeutics will be chiefly owing. It is evident that, for rational therapeutics, we must know what there is to be treated. No man in our profession deserves greater credit than the pathologist—including, of course, the clinical pathologist, and never forgetting the medical officer of health. The medical officer of health is the pathologist of the social organism, and deserves the highest social recognition. Speaking more narrowly, tacitly assuming the obvious qualifications, the best practitioner, perhaps not the most confident one, is he who has carefully made most post-mortem examinations. I do not mean him who stops here, who stops in a stage which is rather to be called one of morbid anatomy than of pathology. But a man must begin here; must begin here to learn for himself, at any rate. The only way of being thoroughly practical is to face the facts, to get verification or disproof of our opinions. A post-mortem examination never flatters us. If, for an example, we diagnose tumor of the cerebellum during the life of a patient, we may, post-mortem, find one in the anterior cerebral lobe. Such a rap on the knuckles is good for us. It makes us less confident, and teaches us to be more careful. A post-mortem examination may tell us that we have been treating a patient with useless, perhaps with injurious, drugs.

Besides scientific pathology there is a crude pathology, and there is, unfortunately, a metaphysical pathology. We have long heard that old maids' husbands are always well behaved, and on the same principle the pathology of those who do not make post-mortem examinations is often confident and definite. He who has made

many post-mortem examinations is not so metaphysical in his explanations of the pathology of some of those cases of disease of which there is no known morbid anatomy. In looking carefully for himself into the coarsely concrete, a realistic habit of mind is produced in a person, and thus he avoids verbal explanations of those most difficult cases which are without known morbid anatomy—of those, for example, commonly called the neuroses. To my young hearers I say, always endeavor to obtain post-mortem examinations. If a man do not learn pathology when he is young, he is not likely to learn it properly later. I would urge on young medical men the formation of clubs for making post-mortem examinations. Let me mention a slender personal experience. Many years ago, at York, a club of this sort was formed. It had no other organization than the agreement that each member should obtain an examination whenever possible, and ask the other members to attend. The history was stated by the person who, so to speak, owned the case, and then each of us saw what there was to be seen, and notes were taken. In this way it is not difficult to get a large experience of direct value for practice.

Coroners' cases are important, not only for the sake of knowledge, but for discipline. A man has to bring his thoughts quickly to a focus. A collection of good reports on these cases would be very valuable for many practical purposes. I do not suppose that our editor has any space to spare, or I would suggest a department in the *Journal* for brief reports of coroners' cases.

A practitioner must not be a pathologist only, although, unless he be a pathologist, he cannot be a good practitioner. Division of labor, strictly or figuratively, is the law of everything whatever. Some of us work chiefly at physiology, some of us at pathology, and some of us at clinical medicine. But to be a good practitioner, a man must know much of all three, and most of us nowadays carry on the three lines of investigation. Every case is a departure from healthy states, and no one is fitted to begin the scientific study of diseased persons unless he know much of the anatomy and physiology of healthy people. To a great extent diseases are, metaphorically speaking, experiments, anatomical and physiological, on the human body. If it be not profane to say so, I would suggest that anatomists and physiologists might have more recourse to these "experiments." Charcot, in doing the best kind of pathological work, has, I should suppose, done as much for the anatomy and physiology of the spinal cord as any one living. He is clinical all round. The three things make up the clinical problem. I do not mean that we have simply to draw incidentally on our anatomical and physiological knowledge when we see a patient, but that anatomy and physiology are integral parts of every case we have to do with.

When we stand at the bedside of a patient, when we come close to our clinical work, there is before us an anatomical, a physiological, and a pathological problem. A great part of our clinical knowledge of cases is really nothing more than anatomical and physiological knowledge. The word disease is too vague; it is used in three senses, each of which should be individualized.

Since I am about to speak of cases of disease, it is not needful to add, were it correct to do so, the adjective morbid to the terms anatomy and physiology. I can best illustrate by diseases of the nervous system.

In each case: 1. There is alteration of structure of some organ; here is an anatomical problem. 2. There is alteration in the proper functional activity of that organ; here is a physiological problem. 3. There is a change in nutrition of tissues of that organ; here is a pathological problem. In many cases we cannot carry out this threefold scheme. But we should attempt it in every one, in order that we may realize vividly what it is we do not know. There is a wider pathology than abnormal nutritive changes in one organ. There is not only the organ diseased or most diseased; there is also the rest of the patient to whom that organ belongs or did belong. I say, "or did belong," because sometimes part of an organ is annihilated. No clinically minded man ever forgets the wider pathology. We no longer believe that a patient "is attacked by disease," although we still use that expression, the metaphysics having long since died out of it. It would be better metaphor to say that the patient breeds the local disease himself, or that it has grown out of the whole of him; or, better still, to say, of many cases, that a certain part of a universally unsound system has fallen to pieces. So we examine our patient all over; we try to get to know as much as we can of the pathology of all important organs of the living patient.

Even yet our pathology is not wide enough. We must not consider the patient himself as more than a detached unit of his family; we have to note the tendencies he inherits, as well as to examine him to see how they are particularly evidenced in one branch or twig of a family tree.

If we take a case of a loss of speech, the threefold distinction in clinical investigation can be easily illustrated. To locate the lesion is nothing other than an anatomical conclusion. To ascertain that it has destroyed speech, that it has left the patient capable of understanding what is said to him, etc., is a physiological (and psychological) investigation. Pathology is concerned only with the nature of the lesion and with its mode of production. Nearly all that has been written on aphasia is anatomical, physiological and psychological disquisition.

To take a still more simple case in illustration; a man has hemiplegia. To think of the case as one of paralysis only, is like the habit of thought of old-fashioned zoölogists, who spoke of animals as if they had nothing particular inside of them, or, as Forbes said, as if they were skins stuffed with straw. We have three very different things to do, each easily done in most cases of this kind. From noting the region affected—face, tongue, arm, leg, etc.—we conclude that there is a lesion of the opposite corpus striatum. Now, this is only anatomical knowledge. Speaking figuratively, it is only an experiment made by disease on an organ. To locate disease is an admirable thing; but localization is not the most important clinical thing. If we stop in this stage, we know nothing of any value for rational treatment of the patient; we may have some good empirical expedients. Next, observing that the

region mentioned is paralyzed, we conclude that there is loss of function of some nerve elements, probably destruction of them. This—physiology—also is a knowledge by itself, of no avail for therapeutical purposes in such a case. But, lastly, by examining our patient all over, for now we have done, for the time, with his paralysis, and from certain empirical evidence, not needing to be stated now, we conclude that loss of function of the organ is caused by cerebral hemorrhage, that a clot has smashed up part of the corpus striatum. This is not enough. There is yet the wider pathology. A patient looks on this illness as an accident; the pathologist never takes that view of it. We often get to know with certainty that the local pathological change is but a local manifestation of a slowly progressing wide state of degeneration; that the man is rotten all over, and that he has one day broken down suddenly in a certain place; that he has chronic Bright's disease, atheromatous arteries, and an hypertrophied left ventricle. By considering these things and their inter-action, we see that he has long been preparing for what seems to him to be only an accident. I submit, that the process by which, in such a pathological state, he comes to have the local lesion—why an artery bursts—is, in chief part, a physiological problem; there is a physiology of the organism made up of bad materials as well as of the healthy organism. Further widening our pathological investigation, we may find that the patient is a twig of a gouty family tree.

Now, the pathology of lesions is the basis for treatment. The best illustration of indirectness of pathology is given by that most important clinical group of cases, syphilitic affections of the nervous system. Without denying that syphilis may primarily affect nerve-tissue, what I only feel sure of is, that it begins in subordinate tissues of nervous organs. The most nearly direct method of "attack," if I may use the word, is when a nerve trunk is the seat of syphilitic disease; but in other cases the process is indirect. Thus the commonest kind of so-called syphilitic hemiplegia depends directly on local softening of the brain, and indirectly on syphilis. This is an excellent illustration, showing how pathology gives precision to therapeutics. What a man has really to treat, if he is trying to cure a patient of syphilitic hemiplegia of this kind, is "local softening of the brain," not syphilis. The order is this: a man has a chancre; he gets rid of it and of subsequent secondary symptoms. Months or years later, when apparently well, except perhaps for headache, some of his cerebral arteries are becoming syphilitically diseased, and then one unfortunate day a branch is blocked up and he becomes hemiplegic. A very little change happens that day, although the consequences are grave; but for that little seeming accident there has been long, slow, insidious preparation. The syphilis is slow, the thrombosis is rapid. This case for treatment, so far as the hemiplegia is concerned, is as certainly one of local softening of the brain, as hemiplegia from ordinary embolism is. To call it syphilitic hemiplegia is all very well, but to think of the paralysis as being a direct result of syphilis is crude pathology.

Next, as to therapeutics. Suppose the patient recovers rapidly under iodide of potassium, should we say we had cured him? There are the facts that he is syphilitic, that he took the iodide, and is now well again. No one denies this sequence. But, then, it so happens that there is another fact. It is quite certain that some hemiplegic patients get well without any drugs whatever. Whether a patient recovers from hemiplegia or not is a question of the size of the lesion. Those who make *post-mortem* examinations do not invoke shrinking or disintegration of the plug, or reestablishment of collateral circulation, because they know that they find holes in the motor tracts of patients who have recovered from hemiplegia—the patients got well, were not cured. So that the hypothesis that the iodide cured the patient is not warranted by facts. Of course, we should treat the patient for syphilis, for, besides more obvious reasons, there is the strongest presumption that other cerebral arteries are diseased, and we may rid them of disease. If the paralysis be transitory, we go on treating the patient for syphilis, to prevent further paralysis. Everybody has a well-grounded faith in the treatment of syphilis—or of its recent effects, at any rate. But I submit that if we could sweep away every vestige of syphilis by drugs, we should not, by so doing, cure the hemiplegia. It is easy to let ignorance stand to us for knowledge. We may believe we have cured our patient by drugs, because we do not know that hemiplegia will pass off without the use of any. But confidence is not always a sign of sagacity, but may result because we have not made numerous *post-mortem* examinations. In the case instanced, there is a plug in the vessel, and consequent local softening. For drugs to do anything toward ridding the patient of his hemiplegia, they must help to get out the plug and to restore starved nerve tissue. Now, as a matter of fact, there is in these cases actual destruction of nerve tissue. If we could look into the man's head we should see that a part of his brain is boycotted. We cannot get at it by drugs.

There is another kind of so called syphilitic hemiplegia, essentially unlike the one already mentioned. The facts are, that a man, the subject of syphilis, has pain in the head for weeks—the best time for anti-syphilitic treatment—significant of the formation of a cortical gummy. One day he has a convulsion, very often beginning unilaterally, and after it he is temporarily hemiplegic (sometimes monoplegic). The process by which the hemiplegia results from syphilis is a doubly indirect one. No one supposes that the gummy discharges; but that the nerve-cells around about it do. Thus, the stages are—(1) Formation of a gummy; next (2) induction of instability by nerve-cells, exactly as by a glioma, possibly by a sort of encephalitis; then (3) sudden excessive discharge; and (4) consequent hemiplegia.

Syphilitic paralysis of a cranial nerve, and the two kinds of syphilitic hemiplegia, are utterly different in the pathological changes on which the symptoms directly depend, although syphilis is respectively the direct, the indirect, and the doubly indirect cause of them.

There is a class of cases of nervous disease—the neuroses—of which the pathology is unknown; chorea, epilepsy, insanity, neuralgia. In these diseases, little or nothing definite has, according to most authorities, been found *post-mortem*; and, curiously, the fact that nothing is found, used to be considered proof that there was nothing to find. The statement that we do not know what there is in a particular disease, is sometimes taken to be equivalent to saying that there is nothing. We call the neuroses functional affections—a term, I submit, which should be kept for physiology. There can be no alteration of function without some material change. A man who does not make *post-mortem* examinations may look on slight and transitory local paralysis as not depending on a material change, but if he did make such examinations, he would not hold that hypothesis. I repeat that we do not know the pathology of the neuroses. But now comes the curious point. We speak most confidently of the inheritance, interchangeability, and fundamental community of pathological character of those very diseases of which the ascertained morbid anatomy is nothing, or next to nothing. Thus there is assumed to be a community of nature betwixt epilepsy and insanity. It may be so. For my part I have not heard of any facts tending to prove anything of the kind. The evidence adduced goes only to prove that many epileptics become insane. The neuroses are spoken of confidently as being nervous diseases in the sense that the pathological changes begin in nervous tissues. Where is the proof, when we know nothing of their pathology? There is no proof. Again, pathology prevents our ideas on this subject being out of focus. Suppose a man has epilepsy, or paralysis, or chorea, and suppose that all his relatives had the nervous symptom or disease, hemiplegia; is there any proof that he inherits a tendency to a nervous affection—that his epilepsy is owing to his nervous tissues *beginning* to go wrong! Not the smallest; because the hemiplegia is owing to arterial changes. If the family history in such a case tends to prove anything, it tends to show that the pathology of the patient's epilepsy is primarily arterial, and only secondarily nervous.

There is a metaphysical pathology. The cases are those on which we either do not obtain *post-mortem* examination, or find nothing *post-mortem*. It is rather difficult to define metaphysics. Some people call psychology metaphysics; some call anything very difficult and complex about mind and body metaphysics; some use it merely as a term of abuse. It is, I think, a great pity that some metaphysics is not taught to students before they enter the profession. This may seem a strange remark, but the reason for making it is, not to urge that they should be metaphysical, but for the diametrically opposite reason that they should be less metaphysical. It is a mistake to suppose that those who write books on metaphysics are the most metaphysical. They have, at any rate, the knowledge that they are dealing with metaphysics. . . .

A good deal under the guise of practicality is pure metaphysics. There was once a man who could conceive an abstract Lord Mayor. The conception he had, so he averred, had neither

head, arms, legs, nor corpulence; it was not an image of any particular Lord Mayor, nor a fusion of several, but an abstract Lord Mayor. Well, we think this metaphysician was too confident in his powers of conception. But do we not imagine ourselves capable of the same kind of marvelous feats? Let us look at a case of aphasia. A man does not speak, and yet can understand what we say to him, and can think—on ordinary things, at any rate. These are the facts; no one disputes them. Now comes the metaphysician, who proffers the explanation that the patient has lost words, but retains the memory or ideas of words. There are, it seems, words, and also memories or ideas of words, which latter, somehow, are not words. Now, what is an idea of a word which is not a word? It is, like the abstract Lord Mayor, simply nothing at all?

We should deal with the difficult and the complex in as realistic a manner as we do with the simple. The hysterical patient, who is said to have paralysis of the will, has some material change. What it is we do not know; and we never shall know, if we be content with metaphysical explanations, which, in one sense, explain everything, but really explain nothing. I have long expressed the opinion that, for the scientific study of diseases, we should regard them as examples of dissolution—using this term as the opposite of evolution. In this way we shall avoid the errors of confusing the psychological with the physical, and shall steer clear of metaphysical explanations.

Besides the sectional addresses already referred to, much interesting work was done in all the Sections. In most of them, in addition to the usual papers, special subjects had been selected for formal discussion. Thus, in the Medicine Section, the treatment of aggravated hysteria and allied forms of neurasthenic disease, chlorotic murmurs, and dropsy; in the Surgical Section, the early treatment of joint disease, and bone-setting; in the Obstetric Section, subinvolution of the uterus; in the Section of Public Health, the alcohol question, and the notification of infectious diseases; in the Ophthalmological Section, the extraction of cataract; a goodly array of important subjects. As it was impossible to be everywhere at the same time, I cannot say anything on these points, which I regret. In the Pathological Section, also, some interesting discussions took place,—first, on diabetes, in which Dr. S. Mackenzie, Dr. Pavy, Dr. Sannaby, and others took part. Mr. Hutchinson opened a discussion on the origin of tumors, in which Sir James Paget, Mr. Butlin, and Dr. Thin took part. On the third day the subject of bacilli was gone into. Dr. Heron (London) demonstrated Ehrlich's method of showing tubercular bacilli; and Dr. Heneage Gibbs (London) demonstrated his own method. For this he claimed greater simplicity in all the details; the bacilli were visible with ordinary illumination and low powers. In the Surgical Section some interesting discussions took place. That on the treatment of joint diseases left us much where we were before. That on bone-setting, introduced by Mr. Marsh, followed by Mr. Adams, elicited a very good paper from Mr. Dacre Fox, who has had large experi-

ence, and is in a position to speak with authority on this matter. He especially advised greater attention on the part of medical men to the slighter forms of injury, and to sprains, from both of which injuries the older bone-setters had made nearly all their reputation. In the same Section, Mr. Lawson Tait read a paper on "A Series of One Hundred Consecutive Cases of Ovariectomy performed without any Listerian Details." He had had three deaths—one from accidental suffocation during vomiting, the other two from thrombosis, extending from the ligature to the heart. Of these 100 cases, 6 were pregnant; all got well; 1 aborted, the other 5 went to the full period. One had acute peritonitis at the time of operation; 3 got peritonitis during treatment. Of the 100 cases, 2 were solid fibromata of the ovary, both recovering; of the remaining 98 cystoma 11 were parovarian tumors; in 60, one ovary was alone affected—3 deaths; in 27, both ovaries were affected; all of which recovered. In 53 of the total number there were serious adhesions; in the three fatal cases there were no adhesions in two; slight adhesion in one. He attributed his success to the following points: First, to the abandonment of the clamp; secondly, to careful cleansing of the peritoneum; thirdly, to careful drainage; fourthly, to increased personal experience; fifthly, to the discontinuance of previousappings (the two fatal cases of thrombosis had been tapped sixteen and thirty times respectively); sixthly, to the complete abandonment of antiseptics; seventhly, to the establishment of hospital discipline and hygiene.

American Dermatological Association.

The American Dermatological Association met in annual session at Newport, R. I., August 30, 31 and September 1. The President, Dr. J. Nevins Hyde, of Chicago, in addition to the annual address, read a paper on "Papillary Dermatitis of the Hairy Scalp," a rare form of skin disease situated at the junction of the back of the neck and the scalp. It consists of elevated patches, which, upon puncture, give exit to pus, followed by a sanguineous gummy fluid. The disease is due to an inflammation of the skin follicles.

Dr. C. Heitzman, of New York, read papers on "Myxo-angioma of the Skin" and "Ergot in Some Forms of Skin Disease." He recommends ergot, in half drachm doses of the fluid extract, several times daily, in pruritus and acne.

Dr. R. W. Taylor, New York, read "Notes on Psoriasis," in which he stated a syphilitic origin for one-fourth of his cases. Dr. George A. Rohi, of Baltimore, has observed two cases following vaccination with bovine virus.

Dr. Henry G. Piffard, of New York, read a paper on "Calx Sulphurates." He believes that acne can be successfully treated by sulphide of calcium, in doses of from one-eighth to one-sixth of a grain. Failures occur from giving it in too large doses. The composition of the drug, also, is very variable. He noticed that in a diabetic patient the sugar entirely disappeared while taking this remedy. Dr. William A. Hardaway, of St. Louis, illustrated, by a life-size painting, a curious case of pigmented neoplasm of the skin,

which first appeared after the patient had unadvisedly taken large doses of iodide of potassium.

Dr. A. R. Robinson illustrated, by microscopic slides, a paper on "The Nerves of the Skin." He demonstrated that the nerves do not terminate in free ends, as usually supposed, but form loops, and return into the superficial or deep plexus, or into a neighboring papilla.

Dr. James C. White insisted strongly that leprosy is inoculable.

Syphiloderma papulosum carinatum was talked about by Dr. I. E. Atkinson, of Baltimore. This rare cutaneous lesion belongs to the early stages of syphilis. The spots are due to a single papular development, which slowly enlarges until it covers a space as large as a silver dollar. The eruption may be sparse, or it may involve the entire body. Its course is slow. It resembles ringworm, from which it can be differentiated by the microscope.

Dr. White, Chairman of the Committee on Statistics, presented a tabulated report based on 58,617 cases of skin disease observed by members of the Association.

The next place and time of meeting will be Lake George, on the Wednesday nearest September 1st, and the two following days.

The following officers were elected for the ensuing year: Dr. R. W. Taylor, of New York, President; Drs. I. E. Atkinson, of Baltimore, and A. R. Robinson, of New York, Vice-Presidents; Dr. A. Van Harlingen, of Philadelphia, Secretary; Dr. George H. Rohé, of Baltimore, Treasurer.

Pharmaceutical Articles.

PACKER'S TAR SOAP.

Dermatologists are well aware that soaps made from rancid fats or by careless methods act as irritants to the skin, and both set up and maintain diseased conditions of its surface. A pure soap, carefully prepared from vegetable oils, is something worth knowing and having. We can speak from personal experience that Packer's Tar Soap meets these requirements. It is exceedingly smooth and agreeable to the skin, and as it is combined with pine tar, it is valuable as a remedy in cutaneous affections, as well as pleasant for a toilette article. We commend it, without hesitation, as the most satisfactory soap, in both these respects, that we have ever used.

The Duration of Isolation in Infectious Diseases.

The *Medical Times and Gazette* says that the Minister of Public Instruction some time since addressed a note to the Académie de Médecine, requesting that body to furnish him with an answer to a question of great importance to schools and families, viz., How long should a scholar suffering from infectious disease be kept separated from his schoolfellows? This was referred to a committee, consisting of MM. Roger, Bergeron, and Hillairet, and their report appears in the *Bulletin de l'Académie*, for July 18th. M. Hillairet, after stating the periods of duration of contagious action of the various diseases concerned, arrives at these conclusions: 1. Pupils attacked by varicella, variola, scarlatina, mea-

ales, mumps, or diphtheria, should be rigorously isolated from their schoolfellows. 2. The duration of this isolation should be forty days for variola, measles, scarlatina, and diphtheria, and twenty-five days for varicella and mumps. 3. This isolation should not be broken through before the convalescent has taken baths. 4. The clothes which the pupil was wearing when he fell ill should be passed through a stove at more than 90° Cent. of temperature, then submitted to sulphur fumes, and thoroughly cleansed. 5. Bedding and curtains of the room, the walls and furniture of the apartment, should also be thoroughly disinfected and washed, and then aired. 6. A pupil who has been attacked by one of these diseases while away from the establishment should not be readmitted unless furnished with a medical certificate that the above mentioned prescriptions have been complied with.

Galvano-cautery in Surgery.

We learn, from some remarks recently made at a meeting of the Medical and Chirurgical Society of London, by Dr. Felix Semon, that the credit of the introduction of the Galvano-cautery in Surgery, usually ascribed to Middeldorpf, of Breslau, is, in reality, due to Mr. John Marshall, of University College, the President of the Society. Mr. Berkeley Hill, we believe, deserves the credit for this vindication of his countryman's and colleague's merit.

Personal.

—Dr. David W. Cheever, of Boston, who has been nominated for the Professorship of Surgery in the Harvard Medical School, rendered vacant by the resignation of Dr. Henry J. Bigelow, is a son of the late Dr. Charles A. Cheever, of Portsmouth, N. H., and was graduated at Harvard College in 1852, and at the Harvard Medical School in 1858. He has since won a very eminent position in his profession.

Items.

—An important literary and scientific discovery is announced from Salonica. The works of the celebrated physician, Galen, which were supposed to have been lost, have been discovered by M. Papageorges. They are in manuscript; date from the fifteenth century, and appear to have originally formed 248 sheets; 144 are in good condition, 24 are mutilated or worm-eaten, and 80 are missing.

—Paris has a commission for regulating the height of buildings, which are graded to correspond to the width of the street upon which they front. Houses may be forty feet high on streets twenty-five feet wide. In no case are they permitted to be over sixty-five feet high, and only then when the streets are sixty-five feet wide or wider.

—A terrible death happened recently at Wall, where a youth died in fearful agonies, from the effects of having drunk a mixture of nitric acid and mercury, in mistake for ginger beer.

—Lisbon diet drink is made as follows: Sarsaparilla 90, red sandal wood 90, white sandalwood 1 90, rosewood 30, guaiacum 30, sassafras 30, mezereon root bark 15, black sulphuret of antimony 60, boiling water 3600 parts; infuse for a night, boil down to one-half, and toward the end of the operation add liquorice 15 parts.

—In the loss sustained by Mr. James Mackie, surgeon to H. M. Consulate at Alexandria, by the destruction of his house in that city, is included an almost unique collection of calculi, the result of twenty-two years' surgical work in the Deaconesses' Hospital; also his library and all his surgical apparatus.

—Among the prizes awarded by the French Academy of Medicine at its last annual meeting, one of 10,000 francs, which is only awarded every six years, was divided between Dr. H. J. Bigelow, of Boston, and M. Th. Anger, Dr. Bigelow receiving 6000 francs and M. Anger 4000 francs.

—The seat left vacant in the section of Medical Physics and Chemistry of the Académie de Médecine, by the death of M. Briquet, has been filled by the election of M. Gariel, who received fifty-seven of the votes of the sixty-eight Academicians present.

—Admiring the example set by the Princess of Wales and many distinguished English ladies, the Parisian ladies are now sending flowers to the hospitals and to the sick poor.

—A remarkably low death rate is recorded at Dover, England, during the past quarter, the total deaths representing an annual rate of 9.1 per 1000 of population.

—M. Fauvel relates an instance in which he found a bullet in the larynx ten years after it had entered the head.

OBITUARY NOTICE.

DR. ANDREWS E. BUDD.

Dr. Andrews E. Budd died in Mt. Holly, N. J., August 12th, 1882. Dr. Budd was born in Woodbury, N. J., July 18th, 1816; attended a full course of lectures on medicine in the University of Pennsylvania, and graduated in the spring of 1842. He began the practice at once in Vincenttown, N. J.; removed to Medford, N. J., in 1845, where he practiced eighteen years. He removed to Mt. Holly, N. J., in 1863, where he practiced the remainder of his life. He was a member of the Burlington County Bible Society, and had held the offices of President, Secretary and Treasurer. He was a delegate to the American Medical Association at New York and Philadelphia, and was last appointed to attend the Association at St. Paul. For some time he had been an efficient ruling elder in the Presbyterian Church. Dr. Budd was eminently useful and influential in the church and community, and his removal is felt most deeply by all.

DEATHS.

ROSENBERGER.—Died, Kate, wife of S. Rosenberger, m. p., No. 2260 N. Seventh street, of this city, in the 33d year of her age.